intermediate transmission stations, each of said plurality of intermediate transmission stations

having a transmitter, a receiver, at least one signal generator that is operatively connected to said

receiver, an automatic control unit operatively connected to said signal generator, and a detector

operatively connected to said automatic control unit, each automatic control unit being

programmed to perform in a station specific fashion, said method comprising the steps of:

originating a first generation instruction at said at least one origination station that

instructs each of said plurality of intermediate transmission stations to generate processor

instructions in accordance with said first generation instruction;

originating a second generation instruction at said at least one origination station that

instructs each of said plurality of intermediate transmission stations to generate a signal

including said processor instructions in accordance with said second generation instruction;

transmitting said first generation instruction; and

transmitting said second generation instruction.

II.   REMARKS

Applicants have reviewed the Office action mailed September 5, 2002 and fully address

herein the objections and rejections contained therein.

The Office action begins with Section I that recites a number of issues that are neither

rejections of nor objections to the claims of the instant application. Applicants address Section I

of the Office action below, but note that the issues raised are not relevant to the patentablity of

the claims in this application. For this reason, Section I of the Office action is improper and

should therefore be withdrawn in its entirety.

Section I of the Office action is followed by Sections II-V[1] that assert the following

objections and rejections of the pending claims.

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[1]   Applicants note that the Office action does not contain a Section IV, and that although
Section V is labeled "103 Rejections," no claims are rejected in Section V.

Claims 5 and 62 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims 2-62[2] stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Applicants reply herein to each ground of rejection presented Office action. Applicants hereby request reconsideration of the instant application.

A.   Response To Section I Of The Office Action

The Office action begins by identifying a list of 30 "Examples" of issues that have been raised in some of applicants' copending applications. The Examiner alleges that in some cases applicants have "handled and addressed" these issues inconsistently in different applications. The Examiner states that the list of "Examples" will be maintained by the Patent Office "in an attempt to ensure consistency in the way that these issues are handled between applications in the future." Office action, p. 2.

Applicants respectfully submit that the "Examples" are simply irrelevant to the prosecution of the instant application for a number of reasons. The Patent Office itself has acknowledged that the list of 30 Examples is not relevant to certain applications because applicants have not asserted priority in those applications to the filing date of applicants' 1981 application:

> It is examiners position that after a series of interview, it has been
> mutually agreed upon that the instant application is entitled the

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[2]   Applicants note that it is not entirely clear which claims stand rejected under § 112, first paragraph. Section III begins with the statement that "Claims 2, 15, 28-30, and 38-42 are rejected under 35 U.S.C. 112, first paragraph . . . ." Office action, p. 42. Later in section III, however, the Office action indicates that "claims 6-62 require clarification" similar to that requested for claims 2-5. Office action, p. 45. In the instant response, applicants have assumed that claims 2-62 are rejected under § 112, first paragraph (albeit improperly), and applicants have demonstrated written description support for all of the pending claims.

earlier priority date of 9/11/87 based on the 07/096,096 application and not the 11/3/81 date based on the 06/317,510 application. Therefore, the written description and the enablement under 112 1st paragraph should be limited to the 1987 specification only. Additionally, the remarks set forth in Paragraph III, items 1-30 [the "Examples"] of the instant office action are carried over from other office actions in similar cases and are presented herein because in the past there have been disagreements between the priority date that the applicants are entitled to. The examiner will withdraw paragraph III from subsequent actions in the instant case application if applicants confirm on record in the next communication that the instant application is entitled to only the 1987 priority date and the citations for claim support will be only provided for the 1987 specification.[3]

The Examiner's position that he will withdraw the irrelevant 30 Examples only if "applicants confirm on record in the next communication that the instant application is entitled to only the 1987 priority date" is improper. Whether or not *a particular claim* is afforded the benefit of an earlier filing date under § 120 simply depends on whether the requirements of § 120 are met *for that claim*. A claim either is or is not entitled to an earlier filing date, and such a determination cannot be made without conducting the appropriate claim-by-claim analysis required by the controlling authorities. Of course, it is applicants' decision whether or not to invoke § 120 in order to overcome an intervening reference. In the instant application, applicants have *not* invoked § 120 to avoid any intervening reference. Moreover, applicants have demonstrated specification support below only with respect to the 1987 specification. Accordingly, the 30 Examples should be withdrawn.

Applicants question the relevance of the 30 Examples, as well as applicants' need to respond to these Examples, because none of the examples forms the basis for any objection to or rejection of a pending claim. *See* 37 C.F.R. § 1.111 ("In order to be entitled to reconsideration or further examination, the applicant . . . must reply to every ground of objection and rejection in the prior Office action."). Further, none of the Examples even refers to any claims that are

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[3] This paragraph was included in Office actions in the following applications: 08/487,397 mailed 9/06/02; 08/438,011 mailed 9/06/02; 08/447,496 mailed 9/06/02; and 08/479,215 mailed 9/05/02.

presently pending in the instant application. Accordingly, the 30 Examples simply have no bearing on the prosecution of the claims pending in the instant application, and are therefore improper.

Applicants further question the basis for including the 30 Examples in the instant application and applicants' need to respond to the Examples, because the vast majority of the Examples have appeared at least once before in other applications and because applicants have already responded to the vast majority of the Examples on the record in their copending applications. For example, all 30 Examples appear in identical form in the 07/17/02 Office action received in application Ser. No. 08/470,571 ("the '571 Application"). Additionally, at least 20 of the current Examples previously appeared in the 08/28/01 Office action in the '571 Application. Accordingly, applicants, in their 01/28/02 and 01/09/03 Responses filed in the '571 Application, have already fully responded on the record to all of the 30 Examples listed in the instant application.

In addition to the identical "Examples" being repeated from other recent Office actions, applicants note that many of the issues discussed in the 30 Examples have been raised by the Examiner before in slightly different forms in applicants' various copending applications. In addressing such issues, applicants have at all times strived to respond in a consistent manner in all of applicants' copending applications. Accordingly, applicants believe that the Examiner is mistaken in his assertion that applicants have "handled and addressed" the issues raised in the 30 Examples "inconsistently."

The 30 Examples are not relevant to the instant application, and applicants respectfully request that the Examples be withdrawn and that the Examiner acknowledge the lack of relevance of the 30 Examples to the prosecution of the instant application. Notwithstanding applicants' position regarding the lack of relevance of the 30 Examples to the prosecution of the

instant case, applicants provide the following responses[4] to the 30 Examples. Applicants reserve

their right to further address any of the 30 Examples if, for example, they are ever raised in the

context of an actual rejection or objection.

Examples 1-3

Examples 1-3 address various issues concerning applicants' ability to claim priority to their 1981

application and the proper test for demonstrating priority under 35 U.S.C. § 120. Because

applicants have not asserted priority to their 1981 application for any of the pending claims in the

instant application, Examples 1-3 are wholly irrelevant to the instant application.

In Example 1, the Examiner discusses prosecution of applicants' copending application

Ser. No. 08/470,571. More specifically, the Examiner focuses on the need to first demonstrate

written description support in applicants' 1987 specification when claiming priority under § 120.

Applicants have not asserted priority under § 120 to the date of their 1981 application for any of

the pending claims in the instant application, and applicants have identified detailed written

description support in their 1987 specification for each and every pending claim in the instant

application in Appendix B. Further, applicants respectfully disagree with the Examiner's

characterization of their position regarding priority in their copending applications. Finally, in

addition to being totally irrelevant to the instant application, applicants submit that the assertions

made by the Examiner in Example 1 are improper in the absence of any priority claim made by

applicants under 35 U.S.C. § 120 to their 1981 application for any claim in the instant

application.

In Example 2, the Examiner takes issue with applicants' discussion and position

regarding the proper test for demonstrating priority under § 120. Again, the Examiner refers to

applicants' responses filed in the '571 Application. Although applicants continue to disagree

with the Examiner's description and application of the legal test for demonstrating priority under

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[4]   More detailed responses to many of the Examples appear in, among other places, applicants'
01/28/02 Response, 05/06/02 Response to Interview Summary, and 01/09/03 Response filed in
the '571 Application.

§ 120 (for the detailed reasons set forth by applicants, e.g., in their 01/09/03 Response in the '571 Application), the issue of priority under § 120 is simply not an issue in the instant application.

In Example 3, the Examiner further discusses applicants' ability to demonstrate priority under § 120 and their ability to support claims pending in the '571 Application using applicants' 1987 specification. Applicants believe that the issues raised in Example 3 are irrelevant to the instant application and submit that the Examiner has mischaracterized applicants' position regarding their ability to demonstrate written description support in both the 1987 and 1981 specifications for the claims pending in the '571 Application and other applications in which applicants are asserting priority under § 120.

Applicants' positions with respect to the various issues related to applicants' ability to claim priority to the date of their 1981 specification and the proper legal test for demonstrating priority under § 120 has been discussed in detail in applicants' submissions in the '571 Application. Applicants will continue to provide the factual and legal bases that justify their claim of priority to their 1981 application in those copending applications where such claim is appropriate and necessary (i.e., if intervening art is applied and applicants elect to invoke § 120 to overcome such intervening art).

Example 4

In Example 4, the Examiner discusses a claim limitation (i.e., "locally generating" images) relevant to certain claims pending in applicants' '571 Application. Applicants respectfully disagree with the Examiner's assertion in Example 4 that Teletext decoders locally generate images for output or display in the same manner that is being claimed in certain ones of applicants' copending applications, and applicants have already addressed the issue of whether the prior art applied by the Examiner teaches local generation of images in the '571 Application. If the Examiner bases a rejection of or objection to any claim pending in the instant application on the issues found in Example 4, or asserts that the issues found in Example 4 are in any way

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relevant to the instant application, applicants will address any such assertions at the appropriate time.

Examples 5 and 27

In Examples 5 and 27, the Examiner discusses the "Teletext prior art" and the inventions disclosed in applicants' 1987 specification in the context of an Office action and a Response filed in the '571 Application. The Examiner asserts in Examples 5 and 27 that applicants' 1987 "packetized SPAM" structure represents little more than applicants' own version of a "conventional extended Teletext system." In Example 27, the Examiner further asserts that certain structures recited in some of applicants' claims pending in the '571 Application (namely, a receiver, a signal detector, a processor, and an output device) are also "found within a conventional CPU/MP/computer implemented Teletext" receiver. These examples are not discussed or applied in the context of any of the claims pending in the instant application and the Examiner does not reject any of the pending claims based on the arguments made in Examples 5 and 27. If and when the Examiner makes rejections of specific pending claims on the basis of issues raised in Examples 5 and 27, applicants will further respond to such a rejection. Notwithstanding the lack of relevance of Examples 5 and 27 to this application, applicants strenuously disagree with the Examiner's disparaging assertions and characterization of the subject matter disclosed in applicants' 1987 specification. Finally, applicants note that they have previously addressed how applicants' claims differ from many "Teletext" prior art references in prior responses filed in copending applications.

Example 6

In Example 6, the Examiner discusses applicants' ability to obtain priority to their 1981 filing date for claiming "computer software." The Examiner discusses this issue with respect to arguments advanced in applicants' '571 Application related to applicants' prior use of the term "programming" in claims pending in the '571 Application. Applicants have fully addressed the issues raised in Example 6 in the '571 Application. The issues raised in Example 6, however, are

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not relevant to the instant application because applicants have not asserted priority under § 120

to the date of their 1981 application for any of the pending claims in the instant application. In

fact, in Example 6, the Examiner acknowledges that applicants' 1987 specification does disclose

the downloading of computer software. Notwithstanding the lack of relevance of Example 6 to

this application, applicants disagree with the Examiner's position regarding applicants' ability to

obtain priority to their 1981 filing date for claims that include the term "programming."

Example 7

In Example 7, the Examiner alleges that Teletext decoders found in the prior art are "signal

processors" as the term "signal processor" is used within the context of applicants' claims

pending in the '571 Application. Again, the issues raised in Example 7 are not discussed in the

context of any claim currently pending in the instant application. Applicants do not understand

the relevance of Example 7 to any of the claims currently pending in the instant application and

no attempt is made to apply the discussion in Example 7 to the instant claims. Notwithstanding

the lack of relevance of Example 7 to this application, applicants respectfully disagree with the

Examiner's assertions and characterization of Teletext decoders found in the prior art and the

signal processor disclosed by applicants. Applicants submit that the signal processors disclosed

in applicants' specifications perform functions that are not disclosed in the cited Teletext prior

art references. Finally, applicants will address these issues if and when an actual rejection is

made by the Examiner based on the issues raised in Example 7.

Example 8

In Example 8, the Examiner asserts that it is applicants' position that applicants'

claimed/disclosed technology is not "correlated/analogous" to Teletext technology. The

Examiner, however, fails to provide any details regarding his position that "conventional

Teletext systems" generally are correlated or similar to applicants' claimed technology. Indeed,

such generalized "correlations" or "analogies" are wholly irrelevant to the issue of whether or

not applicants' claims are patentable. Applicants' position is that none of the specific references,

related to Teletext or otherwise, alone or in combination, teach the methods and apparatus claimed by applicants. The Examiner further argues that applicants have previously indicated it is their belief that the scope of many of their pending claims encompasses the "Weather Star" system/receiver technology. First, the question of whether or not a particular system would be covered by a pending claim is wholly irrelevant to the examination of the instant claims, unless such system is prior art. The Examiner has not established that the Weather Star system is prior art. Second, although the Examiner vaguely refers to applicants' "pending amended claims," he makes no reference to a specific application *or a specific claim*. Due to the Examiner's broad treatment of these issues, applicants cannot respond in any meaningful manner to the issues raised in Example 8.

Example 9

In Example 9, the Examiner discusses an issue that arose in the prosecution of the '571 Application regarding whether "digital television signals/programming" was well known in the relevant art at the time that applicants filed their specifications. In their 1/28/02 Response filed in the '571 Application, applicants fully addressed the Examiner's rejections under § 112, second paragraph, of claims with limitations of "digital television." Further, applicants maintain their position stated in the '571 Application regarding the Schwartz et al. reference. Applicants note that there are no rejections of or objections to any of applicants' pending claims in the instant application based on the issues raised in Example 9, and applicants reserve the right to further respond to the issues raised in Example 9 if any of these assertions are relied on to object to or reject any claim in the future.

Example 10

In Example 10, the Examiner discusses two references of Zaboklicki: DE 2,914,981 and GB#2,016,874. Despite the Examiner's characterization of applicants' arguments regarding these references, applicants maintain that neither Zaboklicki reference anticipates or renders obvious any of applicants' pending claims in the instant application. Applicants have previously

addressed issues raised in Example 10 in the '571 Application, and applicants will continue to address in detail any rejection under § 102 or § 103 in which a Zaboklicki reference is applied.

Examples 11, 12, 15 and 16

In Examples 11, 12, 15 and 16, the Examiner discusses applicants' use of the term "programming" in the 1981 and 1987 specifications. More specifically, Examples 11, 12, 15 and 16 assert that applicants cannot claim a 1981 priority date for claims including the term "computer programming," because of an allegedly narrow definition of that term in the 1981 specification. The issues raised in Examples 11, 12, 15 and 16 are only relevant if applicants rely on § 120 to obtain the benefit of their 1981 filing date. As applicants have not claimed priority to their 1981 application for any claims currently pending in this application, the issue is not relevant to the instant application. If and when the Examiner asserts that the issues found in Examples 11, 12, 15 and 16 are relevant to the claims pending in the instant application, applicants will respond at the appropriate time. Finally, applicants have fully addressed the "programming" issues raised in these examples in several prior responses filed in the '571 Application.

Example 13

In Example 13, the Examiner discusses whether or not radio and television arts represent non-analogous arts. The Examiner states that applicants have previously asserted that the radio and television arts are non-analogous arts. The Examiner's assertions in Example 13 do not form the basis for any rejection of or objection to any specific claim pending in the instant application. To the extent necessary, applicants will further address the issues raised by the Examiner in Example 13 if and when such issues are ever raised in the context of a rejection of or objection to a specific pending claim based on specific applied references in the identified arts.

Example 14

In Example 14, the Examiner discusses issues related to a claim recitation (simultaneous and sequential) in the context of two of applicants' copending applications (i.e., the '571 Application

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and Application Ser. No. 08/469,078. The Examiner's assertions in Example 14 do not form the basis for any rejection of or objection to any specific claim pending in the instant application. To the extent necessary, applicants will further address the issues raised by the Examiner in Example 14 if and when such issues are ever raised in the context of a rejection of or objection to a specific pending claim. Additionally, applicants note that they have fully addressed issues related to the Examiner's concerns regarding "simultaneous and sequential" in their January 28, 2002 Response filed in the '571 Application.

Examples 17-20 and 23-26

Examples 17-20 and 23-26 discuss various issues related to applicants' ability to obtain a priority date based on their 1981 application and the proper legal test to be applied when analyzing an applicants' ability to obtain a priority date under § 120. None of the issues discussed in Examples 17-20 and 23-26 is relevant to the instant application because applicants have not asserted a 1981 priority date for the claims pending in the instant application. Further, applicants have addressed the issues related to priority in detail in their responses filed in the '571 Application and Application Ser. No. 08/487,526.

Example 21

In Example 21, the Examiner describes and compares the technology disclosed by applicants in their 1981 and 1987 specifications and asserts that the technology disclosed in applicants' two specifications is "vastly different." While it is true that the 1987 application includes many enhancements and improvements, applicants maintain that the subject matter disclosed in their 1981 application is also disclosed in the 1987 application. Second, because applicants have not asserted a 1981 priority date for the claims pending in the instant application, applicants' 1981 specification and any comparison between applicants' 1981 and 1987 specifications are not relevant to the instant application. Finally, the issues raised in Example 21 have previously been addressed in the '571 Application. Applicants will continue to provide appropriate factual and

legal arguments as to why they are entitled to a 1981 priority date in all cases where it is relevant.

Example 22

In Example 22, the Examiner discusses a perceived difficulty in interpreting terminology in applicants' claims in light of the 1981 and 1987 specifications. More specifically, the Examiner asserts that certain terminology in applicants' claims takes on different interpretations when such terminology is read on different teachings from applicants' 1981 and 1987 disclosures. The alleged "problem" described in Example 22 is simply not applicable to the instant application because applicants have not asserted a priority date based on their 1981 application for any claim pending in the instant application. In the instant application, only the 1987 specification is used to support the pending claims. Accordingly, the issues raised by the Examiner in Example 22 are not relevant to the instant application. Further, applicants have fully addressed Example 22 in the '571 Application.

Example 28

In Example 28, the Examiner discusses a specific claim pending in the '571 Application (claim 56). Specifically, the Examiner questions applicants' written description support for the recitation "interactive ultimate receiver station" previously appearing in claim 56 of the '571 Application. Applicants maintain that both the 1981 and 1987 specifications unquestionably disclose "interactive receiver stations." *See, e.g.,* 1981 Specification col. 20, ll. 23-27, and "Local Input" in Figure 6D; 1987 Specification, p. 288, ll. 1-20. The Examiner's assertions in Example 28 do not form the basis for any rejection of or objection to any specific claim pending in the instant application. To the extent necessary, applicants will further address the issues raised by the Examiner in Example 28 if and when such issues are ever raised in the context of a rejection of or objection to a specific pending claim. Finally, applicants note that they have already fully addressed Example 28 in the '571 Application.

Example 29

Example 29 discusses limitations directed to combining images (e.g., where a "portion" of an image is "replaced" by a portion of another image) which are allegedly present in claims in applicants' '571 Application. Applicants maintain that applicants' specifications broadly teach the combining of images. The Examiner's assertions in Example 29 do not form the basis for any rejection of or objection to any specific claim pending in the instant application. To the extent necessary, applicants will further address the issues raised by the Examiner in Example 29 if and when such issues are ever raised in the context of a rejection of or objection to a specific pending claim. Further, applicants have already fully addressed the issues raised in Example 29 in the '571 Application.

Example 30

In Example 30, the Examiner discusses the publication date of article/reference by Gunn et al. Applicants acknowledge that the Gunn reference is a transcript from a conference in London that took place from March 26-28, 1980. But this information alone does not qualify the reference as prior art (i.e., it was unclear when the paper was published). However, since the mailing of the 7/17/02 Office action in the '571 Application, applicants received a copy of the Gunn reference that bears a Massachusetts Institute of Technology Library received stamp dated December 4, 1980. The Examiner also alleges in Example 30 that applicants have previously neglected to provide the Office with information regarding the publication dates of many references. Applicants have diligently supplied the Office with references as they have become known to applicants. In some instances, applicants were not provided with dates of certain references, so applicants were not able to provide the Office with dates for each and every reference identified on some of applicants' Information Disclosure Statements. Additionally, applicants submit that the discussion in Example 30 is not relevant to the instant application because the Gunn reference is not applied against any claim pending in the instant application.

B.   Response To Rejections Under Section 112, Second Paragraph

Claims 5 and 62 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Applicants address each ground of rejection under the second paragraph of Section 112 as follows.

Regarding claims 5 and 62, the Examiner asserts that a method claim must positively set forth "active steps of manipulation" which comprise the claimed method. The Examiner further asserts that each claim is "loaded with function language that seems to be indicative of active steps of manipulation yet the suggested steps are never positively recited . . ." Office action p. 41. Claim 62 has been cancelled, and applicants respectfully submit that claim 5 is capable of performing the method set forth in the amended claim.

Claim 5 sets forth signals that have a defined effect at at least one transmitter station. For example, the instruct signal is defined as having a particular function at at least one transmitter station. In claim 5, the transmission of the instruct signal *does* cause a transmitter station to generate at least one generation instruction. "There is nothing inherently wrong with defining some part of an invention in functional terms." M.P.E.P. § 2173.05(g). Claim 5 does not imply that the method includes steps that are not recited, as asserted by the Examiner. To the contrary, claim 5 expressly sets forth steps of originating and transmitting signals. Claim 5 further expressly sets forth the specific properties of the signals originated and transmitted in functional terms. Applicants respectfully submit that the form of claim 5 is proper for the reasons set forth in M.P.E.P. § 2173.05(g).

The Examiner also rejects claim 5 and 62 for applicants' use of the alternative expression "one of a transmitter and a receiver station." Claim 62 has been cancelled. Claim 5 has been amended to recite "originating a control signal which operates at said transmitter station to communicate . . ." thus overcoming the reject of claim 5.

For at least the foregoing reasons, applicants submit that the rejection of claims 5 and 62 under Section 112, second paragraph should be withdrawn.

C.   Response To Rejection Under Section 112, First Paragraph

The Examiner prefaces his rejections under § 112, first paragraph, by listing a series of quotations from a decision issued in prior litigation pending before the International Trade Commission (ITC) involving one of applicants' issued patents. In Section III, the Examiner simply lists several quotations and then states that the Examiner "continues to adopt these same positions in regard to the pending amended claims currently at issue." Apparently, the Examiner includes these quotations to support his rejections under § 112, first paragraph. The Examiner, however, fails to provide any discussion or explanation regarding the proper procedural and factual context of these quotes. Placed in an accurate and proper context, the record from the ITC litigation actually supports applicants' position that the pending claims are justified by the instant specification.

Before addressing the specific passages quoted in the Office action, applicants must first provide a procedural overview of the ITC litigation. In the litigation before the ITC, the owner of applicants' issued patents and the assignee of the instant application, Personalized Media Communications L.L.C. (PMC), alleged that certain products imported into the United States infringed several claims of U.S. Patent No. 5,225,277. Following an evidentiary hearing, the ITC administrative law judge, Judge Luckern, issued a decision entitled "Initial and Recommended Determinations" (Initial Determinations) on October 20, 1997. *See In re Certain Digital Satellite Sys. (DSS) Receivers & Components Thereof*, No. 337-TA-392, 1997 WL 696255 (Int'l Trade Comm'n Oct. 20, 1997). In connection with the evidentiary hearing, three separate groups submitted briefs and arguments to Judge Luckern: 1) PMC; 2) the accused infringers (Respondents); and 3) the ITC Staff. Judge Luckern's Initial Determinations made various findings and concluded that: 1) claims 3, 6, 7, 12, 15, 35, and 44 were invalid as indefinite; 2) claims 3, 6, 7, 12, 15, 35, and 44 were invalid as not enabled; 3) claim 7 was invalid as anticipated; and 4) no asserted claim was infringed. Significantly, the Respondents challenged only one claim, claim 44, for lack of written description support. Judge Luckern found that claim 44 was *not invalid* under § 112, first paragraph, for a failure to provide proper

written description support. *Thus, no claim asserted in the ITC litigation was held invalid by Judge Luckern under 35 U.S.C. § 112, first paragraph, for failure to provide adequate written description support.*

On December 4, 1997, the ITC issued its Final Determination, which adopted some, but not all, of Judge Luckern's Initial Determinations. Specifically, the ITC's Final Determination adopted Judge Luckern's claim constructions and findings that the asserted claims were indefinite and not infringed. On the other hand, the ITC did not adopt Judge Luckern's other findings concerning, for example, whether the claims were enabled or whether claim 7 was anticipated. On appeal before the Federal Circuit were only those findings by Judge Luckern that the ITC expressly adopted in its Final Determination. The Federal Circuit's opinion: 1) reversed Judge Luckern's and the ITC's determination that the asserted patents claims were invalid for indefiniteness; 2) vacated Judge Luckern's and the ITC's determination that asserted claim 7 was not infringed; and 3) affirmed Judge Luckern's and the ITC's determination that claims 6 and 44 were not infringed. *See Personalized Media Communications, LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 48 USPQ2d 1880 (Fed. Cir. 1998). As a result of the Federal Circuit opinion, the case was remanded to the ITC. After the case was remanded to the ITC, PMC withdrew its complaint and the ITC vacated Judge Luckern's Initial Determination with respect to the findings of invalidity for anticipation and lack of enablement. *See In re Certain Digital Satellite Sys. (DSS) Receivers & Components Thereof*, No. 337-TA-392, 2001 WL 535427 (Int'l Trade Comm'n May 13, 1999). Accordingly, the quotes relied upon by the Examiner in the Office action, all of which are from Judge Luckern's discussion of invalidity for lack of enablement, were vacated by the ITC.

As applicants have already noted, with respect to the only claim even challenged under the written description requirement of § 112, Judge Luckern concluded that the claim was *not invalid* on that basis.[5] Regarding the first quote, Judge Luckern's belief that the 1987

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[5] Additionally, in allowing the claims asserted in the ITC to issue, the PTO understood that those claims were adequately supported under § 112.

specification is "difficult to understand as it is dealing with many possible systems," even if true, is not a proper reason for the Examiner to conclude that none of applicants' claims are supported under § 112. Regarding the second quote, in which Judge Luckern discusses the complainant's identification of written description support for the asserted claims of U.S. Patent No. 5,225,277, what is important is that Judge Luckern did not find that any of the asserted claims were invalid for failure to satisfy the written description requirement of § 112. Finally, the last two quotes identified by the Examiner actually contain statements made by the ITC Staff in opening arguments. The comments advanced by the Staff in the ITC litigation describing "directions to a treasure map" and "ships passing in the night" are attorney arguments advanced during litigation, and such arguments are simply not indicative of applicants' actions before the PTO.

When the Examiner's citations to the ITC record are presented accurately and in their proper substantive and procedural context, the citations do not support the Examiner's position. Indeed, the ITC record is consistent with applicants' position on the written description issue. The statements relied upon by the Examiner are nothing more than dicta concerning a finding by Judge Luckern that was later vacated. Further, even if these findings had not been vacated, the observations by Judge Luckern do not contradict applicants' position that the pending claims are properly supported under § 112, first paragraph.

In Section III, the Examiner rejects claims 2-62 under 35 U.S.C. § 112, first paragraph, as containing subject matter that was not sufficiently described in the specification. In making these rejections, however, the Examiner does nothing more than identify specific limitations pending in a given claim and state "it is not clear where the disclosure as originally filed described the recited step/process . . . " There is absolutely no analysis of, reference to, or discussion of any of the teachings found in applicants' specification which relate to the claimed subject matter. Because the Examiner has failed to provide any reason or analysis as to *why* applicants' claims are not sufficiently supported under 35 U.S.C. § 112, first paragraph, the Examiner has failed to meet his burden to sustain such a rejection.

An Examiner has the initial burden of presenting a prima facie case of unpatentability by:

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"[P]resenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims." . . . [T]he burden placed on the examiner varies, depending on what the applicant claims. If the applicant claims embodiments of the invention that are completely outside the scope of the specification, then the examiner or Board need only establish this fact to make out a prima facie case. If, on the other hand, the specification contains a description of the claimed invention, albeit not *in ipsis verbis* (in the identical words), then the examiner or Board, in order to meet the burden of proof, must provide reasons why one of ordinary skill in the art would not consider the description sufficient. Once the examiner or Board carries the burden of making out a prima facie case of unpatentability, "the burden of coming forward with evidence shifts to the applicant." . . . [to] show that the invention is adequately described to one skilled in the art.

In re Alton, 76 F.3d 1168, 1175 (Fed. Cir. 1996) (citations omitted).

As the Alton case makes clear the Examiner's burden varies in making a valid rejection under § 112, first paragraph. In the Office action, the Examiner has not even met the most lenient burden described in Alton. The Examiner does not assert that applicants' claims or specific limitations in applicants' claims are completely outside the scope of the specification; the Examiner simply identifies specific claim limitations and requests "clarification." Accordingly, under the standard set forth in *Alton*, the Examiner has not met his burden to "provide reasons why one of ordinary skill in the art would not consider the description sufficient." *Alton*, 76 F.3d at 1175.

Notwithstanding the Examiner's failure to meet his burden for making a proper rejection of applicants' pending claims under § 112, first paragraph, applicants have provided a chart (attached as Appendix B) that identifies detailed written description support for each and every limitation of the pending claims. Applicants respectfully submit that the illustrative support identified in Appendix B, together with applicants' narrative discussion below, demonstrates that the claimed subject matter is described in the specification in such a way as to reasonably convey to one skilled in the art that applicants had possession of the claimed inventions at the time the 1987 application was filed. Applicants wish to note that the support provided below and in

Appendix B is illustrative and the claims may be supportable by other/additional teachings of the 1987 specification. Applicants also wish to note that the claims of the instant application should not be construed to be limited based on the support provided.

1. Claim 2 And Claims Depending Therefrom

Claim 2 is directed to a method of communicating and controlling the receipt and presentation of programming in a network. In amended claim 2, data related to the programming is input to a computer at an intermediate transmission station (ITS). A first downloadable code related to the programming is transmitted to, and detected at, the ITS. The detected first downloadable code is passed to the ITS computer and a second downloadable code is generated by processing the inputted data under control of the first downloadable code. The second downloadable code is transmitted to at least one receiver station, and under the control of the second generated downloadable code, the subscriber station is caused to receive and present information that completes or supplements the programming.

The specification discloses intermediate transmission stations that receive and transmit a network transmission, and a commercial of program unit Q that is embedded in the network transmission, to subscriber stations (p. 374, l. 20 - p. 375, l. 6). Regarding the inputting step, the specification discloses that local-formula-and-item information (e.g., the recited data) is input to an ITS computer (p. 375, ll. 13-20). The inputted local-formula-and-item information relates to the programming because it includes data (p. 376, ll. 8-14) used to customize the programming (i.e., the network transmission which includes the commercial of program unit Q).

Regarding the transmitting step, the specification discloses that generate-set-information-message #10 (which supports the recited "first downloadable code") is embedded in a programming transmission and transmitted to an ITS (p. 377, ll. 26 - 35). The disclosed generate-set-information-message #10 is "related" to the programming because generate-set-information-message #10 includes information segment information of an intermediate

generation set of Q that includes generally applicable information applicable to the commercial of program unit Q (p. 377, ll. 26-35; p. 357, ll. 21-35).

The specification further discloses that at the ITS, generate-set-information-message #10 is detected and passed to the ITS computer (p. 378, ll. 4-6; Figs. 6A-6B). Under the control of generate-set-information-message #10, the specification discloses that the ITS generates the program instruction set of Q.1 (which supports the recited "second downloadable code") (p. 379, ll. 5-31) by processing the local-formula-and-item-information data (p. 379, l. 31 - p. 380, l. 5; p. 378, ll. 4-23).

Regarding the step of transmitting the second downloadable code to a receiver station, the specification discloses that program-instruction-set message #10, which includes program instruction set of Q.1 (p. 385, ll. 24-30; p. 484, ll. 7-18), is transmitted from the ITS to a field distribution system (p. 385, ll. 9-16) and received at an ultimate receiver station (p. 484, ll. 7-10).

At the receiver station, claim 2 specifies that the receiver station is caused to receive and present information to perform completing or supplementing programming under the control of the first downloadable code. The specification discloses that under control of program instruction set of Q.1 (e.g., the recited "second downloadable code") the receiver station microcomputer generates specific information of a series of outputs or overlays which are received and presented to the viewer at the receiver station monitor (p. 485, l. 10 - p. 486, l. 27). These overlays, which include, for example, binary image information of "$1,071.32" are received at and displayed on the receiver station monitor to "complete" the commercial of program unit Q also being output and displayed on the monitor (p. 490, l 10 - p. 491, l. 16). The specification further discloses that particular print information (which is part of program instruction set of Q.1), for example, information including the specific price "$1,071.32" can be sent to the printer of the receiver station for printing which serves to "supplement" the commercial of program unit Q (p. 495, l. 21 - p. 496, 13 *et seq.*). The support identified above for the "receiving," "presenting," "completing," and "supplementing" aspects of claim 2

demonstrates that these functions are performed under control of program instruction set of Q.1 (e.g., the generated second downloadable code).

Applicants respectfully submit that the specification filed in 1987 demonstrates that applicants possessed the invention defined by claim 2. The specific citations in Appendix B and the general discussion above show how the specification demonstrates possession.

Claims 25, 26, and 28 depend directly or indirectly from claim 2. The support for these claims is thus based on the support discussed with respect to claim 2, and additional exemplary support for each dependent claim is identified in Appendix B.

2.   Claim 3 And Claims Depending Therefrom

Claim 3 is directed to a method of communicating signals in a communications network. The communications network is comprised of at least one origination station (OS) and a plurality of intermediate transmission stations (ITS). Each ITS has a receiver, at least one signal generator connected to a receiver, a transmitter, an automatic control unit connected to at least one signal generator, and a detector connected to at least one signal generator. In this method, an information transmission, which includes at least one generation instruction and at least one signal for comparison, is transmitted from the OS and received at each ITS. At the ITSs, the generation instruction and signal for comparison are detected and passed to the automatic control unit. A signal (the "respective generated signal") is then generated at each ITS in accordance with the generation instruction, and a first respective generated signal generated by one ITS is different from a second respective generated signal generated by another ITS. The respective generated signal is then transferred to the ITS transmitter based on a comparison performed by the automatic control unit in accordance with the signal for comparison.

The specification discloses the claimed communications network which includes at least one origination station and a plurality of ITSs. The specification discloses that "a remote network origination and control station, such as the aforementioned program originating studio that originates the transmission of the 'Wall Street Week' program, can control a plurality of

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intermediate transmission stations" (p. 374, ll. 20-24). The specification discloses the features of each ITS that are recited in claim 3. For example, the specification discloses that the ITS (which is depicted in Figures 6A and 6B) includes a receiver (p. 381, ll. 14-16) that is connected to a signal generator (p. 381, l. 12 - p. 382, l. 7, *see also* Figs. 6A and 6B). The specification further discloses that each ITS has a cable program controller and computer that is the automatic control unit for the ITS (p. 326, ll. 19-20). The disclosed automatic control unit is connected to the ITS signal generators (p. 354, ll. 18-24). Finally, the disclosed ITS has a signal processor system (71, depicted in figure 2D, p. 325, l. 34 - p. 326, l. 18), which is connected to signal generators, 82 and 86, and which includes a detector (Figs. 2A and 2D) connected to the signal generator (Figs. 6A-6B).

In claim 3, an information transmission, which includes at least one generation instruction and at least one signal for comparison, is transmitted from the OS to each ITS, and the generation instruction and signal for comparison are received, detected, and then passed to the ITS automatic control unit. The specification discloses that a program originating studio (e.g. the recited origination station) transmits the commercial of program unit Q in a network transmission (p. 374, ll. 32-34). The program originating studio embeds in the network transmission: 1) a SPAM message addressed to ITS computers called the generate-set-information message #10 (e.g., the recited generation instruction) (p. 377, ll. 25-35); and 2) a SPAM message addressed to ITS computers called the transmit-and-execute-program-instruction-set message #10 (e.g., the recited signal for comparison) (p. 385, ll. 3-8). The ITSs receive the network transmission (p. 377, ll. 7-9; p. 381, ll. 12-19) and receive, detect, and pass to ITS computer 73 (which is the automatic control unit of the ITS), the accompanying SPAM messages (generate-set-information message #10, p. 378, ll. 4-7; Figs. 6A-6B) (transmit-and-execute-program-instruction-set message #10, p. 385, ll. 3-10; Figs. 6A-6B).

Regarding the step of generating the respective generated signal at the ITS, the specification discloses that receipt of generate-set-information message #10 at the ITS causes the ITS to generate the program instruction set of Q.1 (e.g., the recited "respective generated signal")

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(p. 378, ll. 7-25). The step of transferring the respective generated signal to the ITS transmitter is supported by the disclosure that the ITS computer causes program instruction set of Q.1 to be transmitted to its field distribution system (p. 385, l. 9- p. 386, l. 6) (Note that the program instruction set of Q.1 (i.e., the "complete information of the program instruction set that is at its program-set-to-transmit RAM memory") is included in the generated program-instruction-set message #10 (p. 385, ll. 24-30; *see also* p. 484, ll. 7-18) that is transmitted to the field distribution system).

In claim 3, the respective generated signal is transferred to the ITS transmitter based on a comparison performed by the automatic control unit in accordance with the signal for comparison. The specification discloses that receipt of the transmit-and-execute-program-instruction-set message #10 causes the program instruction set of Q.1 (the "respective generated signal") to be transmitted (p. 385, ll. 9-13). The transmit-and-execute-program-instruction-set message #10, like all disclosed commands, includes header information and an execution segment (p. 385, ll. 24-27; p. 44, ll. 14-25). In transferring program-instruction-set message #10 and program instruction set of Q.1 to the transmitter, the SPAM decoder of ITS computer 73 (which functions in the same manner as the SPAM controller of microcomputer 205 (p. 359, ll. 14-20)), processes the execution segment of transmit-and-execute-program-instruction-set message #10 by performing a comparison (p. 101, ll. 4-29). Accordingly, the specification describes the transfer of respective generated signal to the ITS transmitter being accomplished based on a comparison performed by the automatic control unit in accordance with the signal for comparison.

Finally, the specification discloses that program instruction set of Q.1 generated at one ITS differs from the program instruction set of Q.2 generated at another ITS (p. 385, l. 35 - p. 386, l. 6). For example, the specification discloses that program instruction sets of Q.1 and Q.2 are different because they contain different lines of code (*compare* p. 379, ll. 5-31, at l. 15, *with* p. 380, ll. 7-23, at line 14).

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Applicants respectfully submit that the specification filed in 1987 demonstrates that applicants possessed the invention defined by claim 3. The specific citations in Appendix B and the general discussion above show how the specification demonstrates possession.

Claims 9-17 and 19-24 depend directly or indirectly from claim 3. The support for these claims is thus based on the support discussed with respect to claim 3, and additional exemplary support for each dependent claim is identified in Appendix B.

3.   Claim 4 And Claims Depending Therefrom

Claim 4 is directed to a method of communicating signals in a communications network. The communications network of claim 4 is comprised of the same features as recited in claim 3, and the written description support for the communications network and its various features can be found in applicants' discussion of claim 3.

In claim 4, at least one generation instruction is originated to effect each ITS to generate processor instructions in accordance with the at least one generation instruction. The specification discloses that a program originating studio transmits a SPAM message addressed to ITS computers called the generate-set-information message #10 (e.g., the recited generation instruction) in a network transmission (p. 377, ll. 25-35). Receipt of the generate-set-information message #10 at one ITS causes the ITS to generate the program instruction set of Q.1 (e.g., the recited "processor instructions") (p. 378, ll. 7-25). A second ITS generates the program instruction set of Q.2 (p. 380, ll. 7-23).

Claim 4 further recites that at least one transmission signal is originated to effect each ITS to transmit the processor instructions in accordance with the at least one transmission signal. The specification discloses that a SPAM message called "transmit-and-execute-program-instruction-set message #10" (e.g. the recited transmission instruction) (p. 385, ll. 3-8) is embedded in a transmission at a program originating studio. The specification discloses that upon receipt of the transmit-and-execute-program-instruction-set message #10, each ITS computer causes program-instruction-set message #10 to be transmitted to its field distribution

systems (p. 385, ll. 9- p. 386, ll. 6). As the specification discloses that the program-instruction-set message #10 at the first ITS includes the program instruction set of Q.1 (e.g., the "processor instructions") (p. 385, ll. 24-30; p. 484, ll. 7-18), the transmission of the processor instructions is supported. At the second ITS, the program instruction set message #10 includes the program instruction set of Q.2 (p. 385, ll. 3-8; p. 386, ll. 3-6).

Finally, in the last two steps of claim 4, the generation instruction and the transmission signal are transmitted. The specification discloses that a program originating studio transmits the generate-set-information message #10 (e.g., the recited generation instruction) in a network transmission (p. 377, ll. 25-29), and the transmit-and-execute-program-instruction-set message #10 (p. 385, ll. 3-8).

Applicants respectfully submit that the specification filed in 1987 demonstrates that applicants possessed the invention defined by claim 4. The specific citations in Appendix B and the general discussion above show how the specification demonstrates possession.

Claims 29 and 31 depend directly or indirectly from claim 4. The support for these claims is thus based on the support discussed with respect to claim 4, and additional exemplary support for each dependent claim is identified in Appendix B.

4.   Claim 5 And Claims Depending Therefrom

Claim 5 is directed to a method of communicating signals in a communications network. Generally, the communications network of claim 5 is comprised of the same features as recited in claim 3, and written description support for those same features of the communications network can be found in applicants' discussion of claim 3. Unlike claim 3, claim 5 does not recite an origination station. The "transmitter station" of claim 5 is supported in the specification by the disclosure of a national intermediate transmission station that is identical to the intermediate station of Figure 6 (p. 534, ll. 28-32).

In claim 5, an information transmission which includes an instruct signal is originated. The specification discloses a European master network station transmitting a SPAM message

(e.g., the instruct signal) in a master transmission (p. 541, ll. 29-34). The instruct signal is

effective at a transmitter station to generate a generation instruction. The specification discloses

that the SPAM message includes information segment information of a national level

intermediate generation set (p. 541, ll. 29-34), and that when the SPAM message is received at

each national intermediate transmission station (e.g., the transmitter station) the intermediate

generation set is executed (p. 541, l. 34 - p. 542, l. 4). Execution of the intermediate generation

set causes the national intermediate transmission station to generate a specific local level

intermediate generation set (e.g., the recited generation instruction) (p. 543, ll. 20-29; p. 544, ll.

16-22).

The generation instruction is effective at each respective one of a plurality intermediate

transmission stations to generate content of a second signal in accordance with the generation

instruction. The specification discloses that the specific local level intermediate generation set

(e.g., the generation instruction) is transmitted to local ITSs (e.g. the plurality of intermediate

transmission stations) (p. 544, l. 31 - p. 545, l. 5). At each local ITS, execution of the specific

local level generation set (e.g., the generation instruction) causes each of the local ITSs to

generate information of a specific program instruction set (e.g., the recited "content of a second

signal") (p. 545, ll. 3-11).

In the first step of claim 5, the second signal is transferred to the transmitter of each

respective ITS in accordance with a signal for comparison and based on at least one comparison

performed by the automatic control unit of each respective ITS. The specification discloses that

a particular transmit-program-instruction-set- SPAM message (e.g., the recited second signal) is

detected at each local ITS (p. 547, ll. 19-26 Figs. 6A-6B). The particular transmit-program-

instruction-set- SPAM message (e.g., the recited signal for comparison) causes the each local

ITS to transmit a message addressed to receiver station computers that contains particular

program instruction set (e.g., the recited second signal) (p. 547, ll. 19-26). Like all commands,

particular transmit-program-instruction-set- SPAM message includes an execution segment and

header information that are compared at the ITS computer 73 (which functions in the same

manner as the SPAM controller of microcomputer 205 (p. 359, ll. 14-20) when the particular transmit-program-instruction-set- SPAM message instructs the local ITS to transmit the particular program instruction set (p. 547, ll. 19-26; p. 47, l. 35 - p. 48, l. 5; p. 544, l. 31 - p. 545, l. 11; p. 377, l. 28-35, p. 17, ll. 19-22; Fig. 2E).

Regarding the second step of claim 5, a control signal is originated which operates at a transmitter station to communicate the generation instruction to a transmitter. The specification discloses that the European master network station embeds (e.g., originates) a SPAM message (e.g., the recited control signal) that instructs the national ITSs to embed and transmit their specific local intermediate sets (e.g., generation instruction) (p. 544, ll. 23-30). In doing so, the SPAM message causes the specific local intermediate sets (e.g., generation instruction) to be sent (e.g., communicated) to the transmitter station transmitter.

Finally, claim 5 specifies that the information transmission, the instruct signal and the control signal are all transmitted. The specification discloses that a European master network station transmits one SPAM message (e.g., the instruct signal) in a master transmission (the information transmission) (p. 541, ll. 29-34), and another SPAM message (e.g., the control signal) (p. 544, ll. 23-30).

Applicants respectfully submit that the specification filed in 1987 demonstrates that applicants possessed the invention defined by claim 5. The specific citations in Appendix B and the general discussion above show how the specification demonstrates possession.

Claims 32 and 34 depend directly or indirectly from claim 5. The support for these claims is thus based on the support discussed with respect to claim 5, and additional exemplary support for each dependent claim is identified in Appendix B.

5. Claim 6 And Claims Depending Therefrom

Claim 6 is directed to a method of communicating signals in a communications network. With one exception, the communications network of claim 6 is comprised of the same features as recited in claim 3, and the written description support for the communications network and its

various features can be found in applicants' discussion of claim 3. In the communications network of claim 6, the detector is operatively connected to the automatic control unit of the ITS. This feature is supported in the specification through the disclosure an ITS having the signal processor system (71, depicted in figure 2D, p. 325, l. 34 - p. 326, l. 18), which is connected to signal generators, 82 and 86, and which includes a detector connected to the signal generator and the automatic control unit (Figs. 2A-2D; Figs. 6A-6B; p. 354, ll. 18-24).

In claim 6, data for processing and instructions including at least one generation control signal are transmitted from an origination station. The specification discloses that a program originating studio (e.g. the recited origination station) embeds in the network transmission and transmits a SPAM message addressed to ITS computers called the generate-set-information message #10 (e.g., the recited instructions) (p. 377, ll. 25-29). The generate-set-information message #10 includes an information segment (e.g., the recited generation control signal) (p. 377, ll. 25-29). The specification also discloses that local-formula-and-item information (e.g., the recited data for processing) is transmitted from the origination station to the ITSs in a SPAM message (375, ll. 26-34).

In claim 6, the data for processing and instructions including at least one generation control signal are received at an ITS. The specification discloses that an ITS receives the generate-set-information message #10 (e.g., the recited instructions) (p. 378, ll. 4-8) and the local-formula-and-item information (p. 375, ll. 26-28; 376, ll. 5-8) and detects the information segment of the generate-set-information message #10 (p. 378, ll. 4-8; Figs. 6A-6B). The specification discloses that at the ITS, the generate-set-information message #10 and the local-formula-and-item information are passed to ITS computer, 73, which is the automatic control unit of the ITS (p. 378, ll. 5-6; p. 375, ll. 26-28; 376, ll. 5-8; Figs. 6A-6B).

In claim 6, each ITS generates a signal based on processing stored data in accordance with the generation control signal. The specification discloses that the ITSs generate a SPAM message called program-instruction-set message #10 (the recited signal) (p. 385, ll. 9-16). Program-instruction-set message #10 includes the program-instruction-set of Q.1 ((p. 385, ll. 24-

30; 385, l. 35 - p. 386, l. 3; *see also* p. 484, ll. 7-18)), and program-instruction-set of Q.1 is

generated by processing the local-formula-and-item information at a particular ITS (p. 379, ll. 5-

13). The processing of the local-formula-and-item information that is included in program-

instruction-set of Q.1 is done when the instructions of the information segment of the generate-

set-information message #10 (e.g., the recited generation control signal) is received at the ITS (p.

378, ll. 7-26). Finally, the specification discloses that the program-instruction-set message #10

(which includes program-instruction-set of Q.1) generated at one ITS differs from the program-

instruction-set message #10 generated at another ITS (which would include, for example,

program-instruction-set of Q.2) (p. 385, l. 35 - p. 386, l. 6). The specification discloses that

program instruction sets of Q.1 and Q.2 are different because they contain different lines of code

(*compare* p. 379, ll. 5-31, at l. 15, *with* p. 380, ll. 7-23, at line 14).

Applicants respectfully submit that the specification filed in 1987 demonstrates that

applicants possessed the invention defined by claim 6. The specific citations in Appendix B and

the general discussion above show how the specification demonstrates possession.

Claim 36 depends directly or indirectly from claim 6. The support for this claims is thus

based on the support discussed with respect to claim 6, and additional exemplary support for this

dependent claim is identified in Appendix B.

6. Claim 7 And Claims Depending Therefrom

Claim 7 is directed to a method of communicating signals in a communications network.

But for one additional feature, the communications network of claim 7 is comprised of the same

features as recited in claims 3 and 6, and written description support for those same features of

the communications network can be found in applicants' discussion of claims 3 and 6. In

addition to the features of the communications networks recited in claims 3 and 6, the

communications network of claim 7 further specifies that each automatic control unit is

programmed to perform the claimed method in a station specific fashion. The specification

discloses that each ITS computer (i.e., the automatic control unit) is programmed with

information applicable only to that particular ITS (p. 375, l. 34 - p. 376, l. 4). In this way, the specification discloses how each ITS is programmed in a station specific fashion.

In claim 7 an information transmission which includes at least one generation control signal is originated. Regarding this originating step, the specification discloses that at a program origination studio a generate-set-information-message #10 (which supports the recited "generation control signal") is embedded in a programming transmission and transmitted to an ITS (p. 377, ll. 26 - 35). The generation control signal is effective at each ITS to generate a generation instruction by processing stored data in accordance with the generation control signal. The specification discloses that receipt of generate-set-information message #10 at one ITS causes the ITS to generate the program instruction set of Q.1 (e.g., the recited "generated instruction") (p. 378, ll. 7-25). The specification discloses that program instruction set of Q.1 is generated, in part, by computing the specific formula-and-item-of-this-transmission-information (p. 378, ll. 12-17; p. 379, ll. 5-15. The formula-and-item-of-this-transmission-information is data stored at the ITS (p. 375, ll. 26-34). A second ITS generates the program instruction set of Q.2 (p. 380, ll. 7-23).

Finally, regarding the transmitting step, the specification discloses that a program origination studio transmits a programming transmission with the SPAM message called generate-set-information-message #10 (e.g., the recited "generation control signal") (p. 377, ll. 26 - 35).

Applicants respectfully submit that the specification filed in 1987 demonstrates that applicants possessed the invention defined by claim 7. The specific citations in Appendix B and the general discussion above show how the specification demonstrates possession.

Claims 37 and 39 depend directly or indirectly from claim 7. The support for these claims is thus based on the support discussed with respect to claim 7, and additional exemplary support for each dependent claim is identified in Appendix B.

7. Claim 8 And Claims Depending Therefrom

Claim 8 is directed to a method of communicating signals in a communications network. Generally, the communications network of claim 8 is comprised of the same features as recited in claim 7, and written description support for those same features of the communications network can be found in applicants' discussion of claim 3 and claim 7. Unlike claim 7, claim 8 does not recite an origination station. The "transmitter station" of claim 8 is supported in the specification by the disclosure of a national intermediate transmission station that is identical to the intermediate station of Figure 6 (p. 534, ll. 28-32).

In claim 8 an information transmission which includes an instruct signal is originated. The specification discloses a European master network station transmitting a SPAM message (e.g., the instruct signal) in a master transmission (e.g., the information transmission) (p. 541, ll. 29-34). Claim 8 specifies that the instruct signal is effective at a transmitter station to generate a generation control signal. The specification discloses that the transmitted SPAM message includes information segment information of a national level intermediate generation set (p. 541, ll. 29-34), and that when the SPAM message is received at each national intermediate transmission station (e.g., the transmitter station) the intermediate generation set is executed (p. 541, l. 34 - p. 542, l. 4). Execution of the intermediate generation set causes the national intermediate transmission station to generate information of a specific local level intermediate generation set (e.g., the recited generation control signal) (p. 543, ll. 20-29).

Claim 8 further specifies that the generation control signal that is generated at the transmitter station is effective to enable at least one ITS to generate a generation instruction by processing data in accordance with a generation control signal. In the specification, the national intermediate transmission station embeds the local level intermediate generation set (e.g., the generation control signal) in a message addressed to the local intermediate transmission stations and transmits this message to the local intermediate transmission stations (p. 544, ll. 23-35). Receipt of this message enables the local ITS to generate a specific program instruction set in the following fashion. When the local intermediate transmission station receives the message

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containing the local level intermediate generation set, the local ITS executes the local level

intermediate generation set and generates information of a specific program instruction set (e.g.,

the recited generation instruction) (p. 545, ll. 3-11). The specific program instruction set is

generated, in part, by computing formula-and-item-of-this-transmission information that is stored

at the local ITS (e.g., processing stored data) (p. 545, ll. 11-16; p. 535, ll. 22-31). The computing

formula-and-item-of-this-transmission information is done in accordance with the local level

intermediate generation set (e.g., the generation control signal) (p. 545, ll. 3-12; p. 379, ll. 5-9; p.

363, l. 34 - p. 364, l. 6).

In the second step of claim 8, a communications control signal is originated which

operates at the transmitter station to communicate the generation control signal to a transmitter.

The specification discloses that the European master network station embeds a SPAM message

(e.g., the communications control signal) in a transmission transmitted to the national ITSs (p.

544, ll. 23-30). Once received at the national ITS, this SPAM message operates to cause the

national ITS to embed and transmit a message that contains information segment information of

a specific local level intermediate generation set (e.g., the generation control signal) (p. 544, l. 31

- 545, l. 2.)

Finally, regarding step 3, the specification discloses that the European master network

station transmits a master transmission (e.g. the information transmission) and a SPAM message

(e.g., the instruct signal) (p. 541, ll. 29-34), and another SPAM message (e.g., the

communications control signal) (p. 544, ll. 23-30).

Applicants respectfully submit that the specification filed in 1987 demonstrates that

applicants possessed the invention defined by claim 8. The specific citations in Appendix B and

the general discussion above show how the specification demonstrates possession.

Claims 40-42 depend directly or indirectly from claim 8. The support for these claims is

thus based on the support discussed with respect to claim 8, and additional exemplary support for

each dependent claim is identified in Appendix B.

8.   **Claim 43**

Claim 43 is directed to a method of communicating and controlling at least one of the reception and presentation of programming in a network. The specification discloses each of the components recited in the network of claim 43: a programming origination station (p. 374, ll. 20-24), an intermediate transmission station (p. 374, ll. 20-24, and depicted in Figures 6A and 6B), and at least one subscriber station (p. 470, ll. 9-12), where the intermediate transmission station includes a receiver (p. 381, ll. 14-16) and a transmitter (p. 375, ll. 4-6), and where the subscriber station includes at least one output device (p. 491, ll. 4-6).

In claim 43, computer program code that is related to first programming is stored at an intermediate transmission station. The specification discloses that the intermediate generation set of Q (e.g., the computer program code) is received and stored at an ITS (p. 356, ll. 13-17; p. 356, ll. 24-27; p. 359, ll. 9-13, p. 377, l. 32 - p. 378. l. 9). The intermediate generation set of Q is related to program unit Q (e.g., the first programming), as the content included in of intermediate generation set of Q is related to the commercial of program unit Q (p. 357, ll. 21-35). Regarding the inputting step, the specification discloses that complete local-formula-and-item-information (e.g., the recited "data") is inputted to the ITS computer (p. 375, ll. 13-20). The local-formula-and-item-information contains information relevant to timely discounts and specials of particular markets in the vicinity of the ITS and, as such, the information (e.g., the data) is related to the commercial that is program unit Q (e.g., the programming) (p. 375, ll. 13-20).

In the next step of claim 43, a first control signal is transmitted to the ITS. At the ITS the first control signal is detected and passed to the ITS computer. The specification discloses that the program origination studio transmits generate-set-information message #10 (e.g., the at least a first control signal) to intermediate transmission stations (p. 377, ll. 26-35). At the ITS, generate-set-information message #10 is detected and input to the ITS computer (p. 378, ll. 4-6; Figs. 6A-6B).

In the next step of claim 43, the stored computer program is executed in response to the first control signal. The specification discloses that intermediate generation set of Q (e.g., the

stored computer program) is loaded and executed at the ITS computer (p. 378, ll. 8-12) upon receipt of the end of file signal of the generate-set-information message #10 (e.g., the at least a first control signal) (p. 378, ll. 4-12).

In the generating step, downloadable computer program code is generated by processing the data under control of the stored computer program code. The specification discloses the processing of the recited data, by stating that the ITS computer computes specific formula-and-item-of-this-transmission information in a predetermined fashion according to the data of the local-formula-and-item information (e.g., the data) that was recorded at the computer (e.g., the local-formula-and-item information data is "processed" to compute the specific formula-and-item-of-this-transmission information) (p. 378, ll. 10-19). The specification further discloses the generation of the downloadable computer program code through the disclosure that the specific formula-and-item-of-this-transmission information is compiled into program modules to become the complete program instruction set information called "program instruction set of Q.1" (e.g., the recited "downloadable computer program code") (p. 378, ll. 17-25).

The downloadable computer program code is then transmitted to at least one subscriber station in response to a second control signal. In the specification, the ITS transmits the program-instruction-set of Q.1 (e.g., the downloadable computer program code) in the program instruction set message #10 (p. 385, l. 2 - p. 386, l. 2). Transmitting the program instruction set of Q.1 in the program-instruction-set message #10 is done upon receipt of the "transmit-and-execute-program-instruction-set message #10" (e.g., the recited second control signal) at the ITS computer (385, ll. 3-16).

In the next steps of claim 43, the first programming is transmitted to, and received at, the ITS. In the specification, a program originating studio transmits program unit Q (e.g., the first programming) in a network transmission to a plurality of intermediate transmission stations (p. 374, ll. 32-35). The network transmission including program unit Q is received at an ITS (p. 375, ll. 4-5).

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In the next step of claim 43, a third control signal and the first programming is transmitted from the ITS to a least one subscriber station. The specification discloses that the program instruction set message #10 (e.g., the recited third control signal) is transmitted from an ITS and received at the ultimate receiver station of a subscriber station (p. 385, ll. 9-16; p. 484, ll. 12-15). The specification also discloses that the network transmission including program unit Q is transmitted from an ITS to a subscriber station (p. 382, ll. 15-16; p. 375, ll. 4-6; p. 470, ll. 9-12; p. 481, ll. 2-9).

In the last step of claim 43, at least one subscriber station is caused, under control of the generated downloadable program code, to receive or present second programming at an output device, wherein the third control signal executes the downloadable program code at the subscriber station. The specification discloses that the subscriber station, under control of the program instruction set of Q.1 (e.g., the downloadable computer program code), receives generated video overlays (e.g. the recited second programming) (p. 485, ll. 14-18; p. 486, ll. 20-27) that are presented with the commercial of program unit Q (e.g. the first programming) (p. 491, ll. 10-16) at the subscriber station monitor (e.g., the at least one output device) (p. 20, ll. 16-19). Finally, receipt of the program instruction set message #10 at the subscriber station (e.g., the recited third control signal) cause the subscriber station to execute the program instruction set of Q.1 (e.g., the downloadable computer program code) (p. 484, ll. 12-17).

Applicants respectfully submit that the specification filed in 1987 demonstrates that applicants possessed the invention defined by claim 43. The specific citations in Appendix B and the general discussion above show how the specification demonstrates possession.

9. Claim 44 And Claims Depending Therefrom

Claim 44 is directed to a method of communicating signals in a communications network. The communications network of claim 44 is comprised of the same features as recited in claim 7, and the written description support for the communications network and its various features can be found in applicants' discussion of claim 7.

In claim 44, information content of at least one first signal including at least one generation instruction is transmitted from at least one origination station. The specification discloses that a program originating studio (e.g. the recited origination station) transmits in a network transmission a SPAM message addressed to ITS computers called the generate-set-information message #10 (e.g., the recited first signal) (p. 377, ll. 25-29). The generate-set-information message #10 is comprised of a "header, a particular execution segment, appropriate meter- monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal" (e.g., the recited "information content") (p. 377, ll. 25-34) and includes the intermediate generation set of Q (e.g., the recited generation instruction) (p. 377, ll. 29-33).

In the next step of claim 44, information content of at least one transmission control signal is transmitted from at last one origination station. In the specification, a SPAM message addressed to ITS computers called the transmit-and-execute-program-instruction-set message #10 (e.g., the recited "information content of at least one transmission control signal") is transmitted from the program origination studio (p. 385, ll. 3-8)

Claim 44 further specifies that the information content of both the at least one transmission control signal and the at least one first signal are received at each ITS, and that the at least one generation instruction is detected at each ITS. The ITSs receive the generate-set-information message #10 (e.g., the information content of the at least one first signal) (p. 378, ll. 4-9), receive the transmit-and-execute-program-instruction-set message #10 (e.g., the information content of both the at least one transmission control signal) (p. 385, 3-10; p. 381, ll. 12-29), and detect the accompanying intermediate generation set of Q (e.g., the generation instruction) included in the generate-set-information message #10 (p. 378, ll. 4-9; Figs. 6A-6B). Regarding the passing step of claim 44, the specification discloses that at the ITS, the intermediate generation set (e.g., the generation instruction) is loaded by ITS computer, 73 (p. 378, ll. 7-8; Figs. 6A-6B), which is the automatic control unit of the ITS.

In claim 44, information content of a second signal is generated at each ITS in accordance with the generation instruction. The specification discloses that at the ITSs loading and executing the intermediate generation set causes the ITS to generate information of a data module set (e.g., the recited "information content of a second signal") (p. 378, l. 28- 35). The information of the generated data module set is stored in a file called DATA_OF.ITS (p. 378, ll. 28-35; p. 379, l. 31 - p. 380, l. 6; P. 365, l. 22 - p. 366, l. 18).

The step of transferring at each ITS the information content of a second signal to the ITS transmitter in accordance with the transmission control signal, is supported by the disclosure that upon receipt of the transmit-and-execute-program-instruction-set message #10 (e.g., the transmission control signal), the ITS computer generates and then transmits a signal called the "data-module-set message #10" (e.g., the second signal) by selecting the information of the DATA_OF.ITS (p. 383, ll. 25-31; p. 384, ll. 11-23). In generating and transmitting data-module-set message #10, the ITS computer selects and transmits the information of DATA_OF.ITS to the ITS generator (e.g. transfers the information content of a second signal to the ITS transmitter) and causes each generator to embed the information in the programming transmission that is transmitted via the generator (p. 384, l. 11 - p. 385, l. 2; p. 369, l. 23 - p. 371, 3).

In the final step of claim 44, the second signal is transmitted from each ITS, such that the transmission time of the second signal when transmitted at one ITS is different from the transmission time of the second signal when transmitted at another ITS. Data-module-set message #10" (e.g., the second signal) is transmitted in the programming of Q transmission (p. 369, l. 23 - p. 371, 3; p. 383, ll. 25-35; p. 384, l. 11 - p. 385, l. 2). The specification expressly discloses that program unit Q can be transmitted from different ITSs at different times (p. 342, l. 26 - p. 342, l. 17), and data-module-set message #10 is transmitted in the programming of Q transmission (p. 369, l. 23 - p. 371, 3; p. 383, ll. 25-35; p. 384, l. 11 - p. 385, l. 2).

Applicants respectfully submit that the specification filed in 1987 demonstrates that applicants possessed the invention defined by claim 44. The specific citations in Appendix B and the general discussion above show how the specification demonstrates possession.

Claims 45-53 and 55-60 depend directly or indirectly from claim 44. The support for these claims is thus based on the support discussed with respect to claim 44, and additional exemplary support for each dependent claim is identified in Appendix B.

10. Claim 61

Claim 61 is directed to a method of communicating signals in a communications network. The communications network of claim 61 is comprised of the same features as recited in claim 7, and the written description support for the communications network and its various features can be found in applicants' discussion of claim 7.

In claim 61, a first generation instruction is originated at at least one origination station. The first generation instruction instructs each ITS to generate processor instructions in accordance with the first generation instruction. The specification discloses that a program originating studio transmits a SPAM message addressed to ITS computers called the generate-set-information message #10 (e.g., the recited first generation instruction) in a network transmission (p. 377, ll. 25-29). Receipt of the generate-set-information message #10 at each ITS causes the ITS to generate the program instruction set (e.g., the recited "processor instructions") (p. 378, 7-25). One station generates the "program instruction set message of Q.1" (p. 378, ll. 23-28; p. 379, l. 5-31) and a second station generates the "program instruction set message of Q.2" (p. 380, ll. 7-23).

Claim 61 further recites that a second generation instruction is originated at at least one origination station. The second generation instruction instructs each ITS to generate a signal including the generated processor instructions in accordance with the second generation instruction. The specification discloses that a program originating studio embeds the "transmit-and-execute-program-instruction-set-message #10" (e.g., the recited second generation instruction) in a transmission (p. 385, ll. 3-9). In claim 61, the second generation instruction instructs an ITS to generate a signal including the processor instructions in accordance with the second generation instruction. The specification discloses that the receipt of the "transmit-and-

execute-program-instruction-set-message #10" (e.g., the recited second generation instruction) at each ITS causes (e.g., instructs) the ITS to generate the SPAM message called "program-instruction-set-message #10" (p. 385, ll. 9-28). At the first ITS, the "program-instruction-set-message #10" includes program instruction set of Q.1 (p. 385, ll. 24-30; p. 484, ll. 7-18). At the second ITS, the program-instruction-set message of the second ITS contains the "program instruction set of Q.2" (p. 386, ll. 3-6). The specification discloses that the recited "signal" is generated in accordance with the second generation instruction because the program-instruction-set-message #10 (e.g. the signal) is generated in part by modifying the meter monitor information of the "transmit-and-execute-program-instruction-set-message #10" (e.g., the recited second generation instruction) (p. 385, ll. 3-6; p. 385, ll. 18-23).

Finally, in claim 61 the first generation instruction and second generation instruction are each transmitted. The specification discloses that a program originating studio transmits the generate-set-information message #10 (e.g., the recited first generation instruction) (p. 377, ll. 25-35), and the "transmit-and-execute-program-instruction-set-message #10" (e.g., the recited second generation instruction) (p. 385, ll. 3-9).

Applicants respectfully submit that the specification filed in 1987 demonstrates that applicants possessed the invention defined by claim 61. The specific citations in Appendix B and the general discussion above show how the specification demonstrates possession.

III.   CONCLUSION

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome or rendered moot. Further, all pending claims are patentably distinguishable over the prior art of record, taken in any proper combination. Reconsideration and allowance of the instant application are respectfully requested.

If the Examiner has any remaining informalities to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such informalities.

Respectfully submitted,
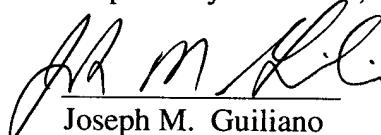
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Appendix A

Claim Language

2.   (Twice Amended)   A method of communicating and controlling

receiving and presenting programming in a network, [said network comprising a

programming origination station, an intermediate transmission station, and at least one

subscriber station, wherein said intermediate transmission station receives said

programming and a plurality of control signals from said programming origination station

and transmitting said programming and said plurality of control signals to said at least

one subscriber station, and wherein said at least one subscriber station presents said

programming in accordance with said plurality of control signals,] said method

comprising the steps of:

inputting to a computer at [said] <u>an</u> intermediate transmission station data [in

respect] <u>related</u> to said programming;

transmitting a first downloadable code [in respect] <u>related</u> to said programming to

said intermediate transmission station;

detecting the presence of said first downloadable code at said intermediate

transmission station and passing said detected first downloadable code to said computer;

generating a second downloadable code by processing said inputted data under

control of said first downloadable code;

transmitting said second downloadable code to [said] at least one [subscriber]

<u>receiver</u> station; and

causing said at least one [subscriber] <u>receiver</u> station to receive and present

information to perform one of completing and supplementing said programming under

control of said generated second downloadable code.

3.   (Three Times Amended)   A method of communicating signals in a

communications network, said communications network including at least one

origination station and a plurality of intermediate transmission stations, each of said

plurality of intermediate transmission stations having a receiver, at least one signal

generator operatively connected to said receiver, a transmitter, an automatic control unit

operatively connected to said at least one signal generator, and a detector operatively

connected to said at least one signal generator, said method comprising the steps of:

transmitting <u>an information transmission, including at least one generation</u>

<u>instruction and at least one signal for comparison</u> [a plurality of first signals] from said at

least one origination station[, each of said plurality of first signals including at least one

generation instruction and at least one signal for comparison];

receiving in each of said plurality of intermediate transmission stations said

<u>information transmission</u> [plurality of first signals];

detecting in each of said plurality of intermediate transmission stations said at

least one generation instruction and said at least one signal for comparison;

passing in each of said plurality of intermediate transmission stations said at least

one generation instruction and said at least one signal for comparison to said automatic

control unit;

generating in each of said plurality of intermediate transmission stations a

respective generated [second] signal in accordance with said at least one generation

instruction; and

transferring in each of said plurality of intermediate transmission stations said

respective generated [second] signal to said transmitter based on at least one comparison

performed by said automatic control unit in accordance with said at least one signal for

comparison, wherein a first of said respective generated [second signal] signals when

generated by a first of said plurality of intermediate transmission stations is different

from a second of said respective generated [second signal] signals when generated by a

second of said plurality of intermediate transmission stations.

4.   (Twice Amended)   A method of communicating signals in a

communications network, said communications network including at least one

origination station and a plurality of intermediate transmission stations, each of said

plurality of intermediate transmission stations having a receiver, at least one signal

generator operatively connected to said receiver, a transmitter, an automatic control unit

operatively connected to said at least one signal generator, and a detector operatively

connected to said at least one signal generator, said method comprising the steps of:

(1)   [receiving a first signal at a transmission station;

(2)   generating] originating at least one generation instruction [and at least one

signal for comparison] to effect each of said plurality of intermediate transmission

stations to generate processor instructions [a second signal] in accordance with said at

least one generation instruction; [and transfer said second signal to said transmitter of

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each of said plurality of intermediate transmission stations based on at least one

comparison performed by said automatic control unit of each of said plurality of

intermediate transmission stations; and]

(2)   originating at least one transmission signal to effect each of said plurality

of intermediate transmission stations to transmit said processor instructions in accordance

with said at least one transmission signal;

(3)   transmitting said at least one generation instruction[.]; and

(4)   transmitting said at least one transmission signal.

5.   (Twice Amended)   A method of communicating signals in a

communications network, said communications network including at least one

[origination] transmitter station including a transmitter, and a plurality of intermediate

transmission stations, each of said plurality of intermediate transmission stations having a

receiver, at least one signal generator operatively connected to said receiver, [a

transmitter,] an automatic control unit operatively connected to said at least one signal

generator, and a detector operatively connected to said at least one signal generator, said

method comprising the steps of:

(1)   [receiving a first signal to be transmitted;

(2)   receiving] originating an information transmission including an instruct

signal which is effective, [in one of] at a transmitter [station and a receiver] station, to

generate at least one generation instruction [and at least one signal for comparison] to

effect each respective one of said plurality of intermediate transmission stations to

generate content of a second signal in accordance with said at least one generation

instruction and transfer said second signal to said transmitter of [each] <u>said respective one</u> of said plurality of intermediate transmission stations <u>in accordance with [said] at least one signal for comparison and</u> based on at least one comparison performed by said automatic control unit of [each] <u>said respective one</u> of said plurality of intermediate transmission stations;

[(3)] (2)   [receiving] <u>originating</u> a control signal which operates at [said one of] said transmitter station [and said receiver station] to communicate said at least one generation instruction [and said at least one signal for comparison] to [one of] a [transmitter station transmitter and a receiver station] transmitter; and

[(4)] (3)   transmitting said <u>information transmission</u> [first signal], said instruct signal and said control signal.

6.   (Twice Amended)   A method of communicating signals in a communications network, said communications network including at least one origination station and a plurality of intermediate transmission stations, each of said plurality of intermediate transmission stations having a receiver, at least one signal generator operatively connected to said receiver, a transmitter, an automatic control unit operatively connected to said at least one signal generator, and a detector operatively connected to said automatic control unit, said method comprising the steps of:

transmitting instructions from said at least one origination station, said instructions including at least one generation control signal;

transmitting data for processing from said at least one origination station;

receiving said instructions and said data for processing in each of said plurality of

intermediate transmission stations, and detecting said at least one generation control

signal, wherein [said] each of said plurality of intermediate transmission stations passes

at least one of (1) said at least one generation control signal and (2) said data for

processing to said automatic control unit, and wherein each of said plurality of

intermediate transmission stations generates a signal [based] by processing stored data

and said data for processing in accordance with said at least one generation control signal

such that said signal when generated by a first of said plurality of intermediate

transmission stations is different from said signal when generated by a second of said

plurality of intermediate transmission stations.

7.   (Twice Amended)   A method of communicating signals in a

communications network, said communications network including at least one

origination station and a plurality of intermediate transmission stations, each of said

plurality of intermediate transmission stations having a receiver, at least one signal

generator operatively connected to said receiver, a transmitter, an automatic control unit

operatively connected to said at least one signal generator, and a detector operatively

connected to said automatic control unit, wherein each said automatic control unit is

[being] programmed to perform in a station-specific fashion, said method comprising the

steps of:

(1)   [receiving a signal at a transmission station;

(2)   generating] originating an information transmission including at least one

generation control signal to effect each of said plurality of intermediate transmission

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stations to generate a generation instruction by processing stored data in accordance with said at least one generation control signal; and

[(3)] (2)   transmitting said information transmission including said at least one generation control signal.

8.   (Twice Amended)   A method of communicating signals in a communications network, said communications network including at least one transmitter [origination] station including a transmitter, and a plurality of intermediate transmission stations, each of said plurality of intermediate transmission stations having a receiver, at least one signal generator operatively connected to said receiver, [a transmitter,] an automatic control unit operatively connected to said at least one signal generator, a detector operatively connected to said automatic control unit, wherein each said automatic control unit is [being] programmed to perform in a station-specific fashion, said method comprising the steps of:

(1)   [receiving a signal to be transmitted;

(2)   receiving] originating an information transmission including an instruct signal which is effective, [in one of] at a transmitter [station and a receiver] station, to generate at least one generation control signal which is effective to enable at least one of said plurality of intermediate transmission stations to generate a generation instruction by processing stored data in accordance with said at least one generation control signal;

[(3)] (2)   [receiving] originating a communications control signal which operates at [said one of] said transmitter station [and said receiver station] to

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communicate said at least one generation control signal to [one of] a [transmitter station

transmitter and a receiver station] transmitter; and

[(4)] (3)   transmitting said information transmission [signal], said instruct

signal and said communications control signal.

9.   (Twice Amended)   The method of claim 3, wherein said at least one

generation instruction instructs each of said plurality of intermediate transmission stations

to generate microprocessor instructions [software], [and wherein said automatic control

units are programmed with different data of at least one item to be generated,] said

method further comprising the step of [transmitting an instruction from said at least one

origination station , said instruction is effective at said plurality of intermediate

transmission stations to generate said data of at least one item based on information

stored at said plurality of intermediate transmission stations, and to place said at least one

item in one of a higher language code and a software module, to accomplish one of:

          (1)   performing one of compiling and linking said software, and

          (2)   generating a machine language code based on said data of at least

one item.] including said microprocessor instructions in said respective generated signal

at each of said plurality of intermediate transmission stations.

10.   (Twice Amended)   The method of claim 3, wherein said automatic

control units are programmed to respond to said at least one generation instruction at

different [times, said method further comprising the step of programming at least one

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receiver station in said communications network to assemble code in response to said

plurality of first signals.] times.

11. (Twice Amended) The method of claim 3, wherein at least a portion of

said information transmission [plurality of first signals contain] includes mass medium

programming, said method further comprising the steps of:

receiving a control signal which operates at each of said plurality of intermediate

transmitter stations to communicate said mass medium programming to said transmitter;

and

transmitting said mass medium programming from each of said plurality of

intermediate transmission stations.

12. (Twice Amended) The method of claim 3, [wherein each of said

plurality of intermediate transmission stations includes at least one selective transmission

device, and wherein said automatic control unit is programmed with one of information

of operating speeds of said at least one selective transmission device, information of

connections of said at least one selective transmission device, and information of

capacities of said at least one selective transmission device, said method] further

comprising the step of transmitting from [said at least one] a second origination station a

control [an instruct] signal which is effective to cause at least one of said plurality of

intermediate transmission stations to store [said at least one] a second generation

instruction and [said at least one] a second signal for comparison [at said at least one

selective transmission device in a specific order].

13.   (Twice Amended)   The method of claim 12, [wherein said at least one

selective transmission device comprises a computer and a memory] <u>further comprising</u>

<u>the step of transmitting said second generation instruction from said second origination</u>

<u>station</u>.

14.   (Twice Amended)   The method of claim <u>11</u> [3], wherein said

[automatic control unit in each of said plurality of intermediate transmission station is

programmed to control a storage device, said method further comprising the step of

instructing different ones of said plurality of intermediate transmission stations to store

and retransmit different portions of said plurality of first signals] <u>mass medium</u>

<u>programming comprises audio</u>.

15.   (Twice Amended)   The method of claim 3, wherein said automatic

control unit in each of said plurality of intermediate transmission stations is programmed

to control a switch, <u>said switch adapted to communicate an information transmission</u>

<u>transmitted from said at least one origination station,</u> said method further comprising the

step of <u>transmitting an instruction from said at least one origination station which causes</u>

<u>at least one of said intermediate transmission station to control its switch</u> [instructing

different ones of said plurality of intermediate transmission stations to cause said switch

to communicate a specific portion of said plurality of first signals and said generated

second signal at different times or on different channels].

16. (Twice Amended)   The method of claim 3, wherein each of said

plurality of intermediate transmission stations transmits [programming on a plurality of

specific channels,] programming, said method further comprising the step of [instructing

different ones of said plurality of intermediate transmission stations to transmit a specific

portion of said plurality of first signals on a plurality of different channels.] transmitting

said programming from said at least one origination station to said plurality of

intermediate transmission stations.

17. (Twice Amended)   The method of claim [3, further comprising the step

of causing different ones of said plurality of intermediate transmission stations to transmit

at least a portion of said plurality of first signals at one of different times and different

channels based on said at least one signal for comparison.] 10, wherein at least one of

said plurality of intermediate transmission stations is programmed to receive said at least

one generation instruction from a local source.

19. (Amended)   The method of claim 3, wherein [a retransmission control

signal instructs said plurality of intermediate transmission stations to retransmit

immediately, said method further comprising the step of selecting at least a portion of

said at least one generation instruction and said at least one signal for comparison to store

and transmit.] at least one of said plurality of intermediate transmission stations generates

control signals and wherein at least one receiver station outputs a video presentation in

accordance with said control signals.

20.   (Twice Amended)   The method of claim [3, wherein said automatic control unit is programmed to organize a plurality of portions of said plurality of first signals in a specific order, said method further comprising the step of causing different ones of said plurality of intermediate transmission stations to organize said at least one generation instruction and said at least one signal for comparison in different orders.] 16, wherein a second information transmission transmitted from each of said plurality of intermediate transmission stations includes said programming, said method further comprising the step of including said respective generated signal in said information transmission at each of said plurality of intermediate transmission stations.

21.   (Twice Amended)   The method of claim [3, wherein said automatic control unit is programmed to incorporate one of (1) at least one datum and (2) a control instruction in at least a portion of said plurality of first signals, said method further comprising the step of causing different ones of said plurality of intermediate transmission stations to incorporate different ones of said one of at least one datum and said control instruction.] 20, wherein said step of including comprises embedding at least a portion of said respective generated signal in the normal transmission location of said programming.

22.   (Twice Amended)   The method of claim [3, further comprising the step of documenting the transmission of at least a portion of said plurality of first signals and said second signal at specific ones of said plurality of intermediate transmission stations.] 21, wherein said programming comprises audio.

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23.   (Amended)   The method of claim [3, further comprising the step of transmitting at least one datum of an availability from said plurality of intermediate transmission stations to a remote data collection station.] 9, further comprising the step of at least one of compiling and linking said microprocessor instructions.

24.   (Amended)   The method of claim 3, [further comprising the step of transmitting at least a portion of said at least one generation instruction and said at least one signal for comparison from a first of said plurality of intermediate transmission stations.] wherein at least one of said plurality of intermediate transmission stations generates control signals, wherein at least one receiver station outputs a first portion of audio in accordance with said control signals, said method further comprising the step of transmitting a second portion of audio to be output with said first portion of audio.

25.   (Amended)   The method of claim 2, further comprising the step of transmitting [at least some] a portion of said first downloadable [code.] code in said second downloadable code.

26.   (Amended)   The method of claim 2, wherein said [subscriber] receiver station generates a portion of said information to one of complete and supplement said programming by processing stored data, said method further comprising the step of transmitting data to be stored at said [subscriber] receiver station.

28.   (Amended)   The method of claim 2, further comprising the step of

transmitting said programming to said <u>receiver</u> [subscriber] station.

29.   (Amended)   The method of claim 4, wherein a plurality of [code

signals] <u>instruction sets</u> are generated at said plurality of intermediate transmission

stations in accordance with said at least one generation instruction, wherein <u>each of</u> said

plurality of intermediate transmission stations [transmit] <u>transmits at least one of</u> said

plurality of [code signals] <u>instruction sets</u> to at least one receiver station and wherein <u>each</u>

said at least <u>one</u> receiver station generates output information content by processing data

in accordance with <u>at least one of</u> said plurality of [code signals,] <u>instruction sets,</u> said

method further comprising the step of transmitting said data.

31.   (Amended)   The method of claim 4, wherein a plurality of <u>instructions</u>

[code signals] are generated at said plurality of intermediate transmission stations in

accordance with said at least one generation instruction, wherein <u>each of</u> said plurality of

intermediate transmission stations [transmit] <u>transmits a portion of</u> said [plurality of code

signals] <u>processor instructions</u> to at least one ultimate receiver station, and wherein <u>each</u>

said at least <u>one</u> ultimate receiver station [one of receives, enables, and presents] <u>outputs</u>

<u>a</u> television programming <u>presentation</u> in accordance with <u>a portion of</u> said [plurality of

code signals,] <u>processor instructions,</u> said method further comprising the step of

transmitting [said] television [programming.] <u>programming to be outputted as a part of</u>

<u>said television programming presentation at each said at least one ultimate receiver</u>

<u>station.</u>

32.   (Amended)   The method of claim 5, wherein [said one of said

transmitter station and said receiver station] at least one of said plurality of intermediate

transmission stations generates a plurality of [code and command signals] instructions in

accordance with said at least one generation instruction, and wherein at least one ultimate

receiver station generates output information content by processing data in accordance

with said plurality of [code and command signals, said method further comprising the

step of transmitting said data.] instructions.

34.   (Amended)   The method of claim 5, wherein [said one of said

transmitter station and said receiver station] at least one of said plurality of intermediate

transmission stations generates a plurality of [code and command signals] instructions in

accordance with said at least one generation instruction, and wherein at least one ultimate

receiver station [one of receives, enables, and presents] outputs a [television

programming] video presentation in accordance with said plurality of [code signals,]

instructions, said method further comprising the step of transmitting [said television

programming.] video to be output with said video presentation.

36.   (Amended)   The method of claim 6, [wherein a plurality of code signals

are generated at said plurality of intermediate transmission stations in accordance with

said at least one generation instruction wherein said plurality of intermediate transmission

stations transmit said plurality of code signals to at least one ultimate receiver station, and

wherein said at least ultimate receiver station one of receives, enables, and presents

television programming in accordance with said plurality of code signals, said method

further comprising the step of transmitting said television programming from one of (1)

said at least one origination station and (2) said plurality of intermediate transmission

stations] wherein at least one ultimate receiver station outputs a first portion of audio in

accordance with said signal, said method further comprising the step of transmitting a

second portion of audio to be output with said first portion of audio.

37. (Unchanged) The method of claim 7, further comprising the step of

transmitting data to be stored at said plurality of intermediate transmission stations.

39. (Amended) The method of claim 7, wherein at least one of said

plurality of intermediate transmission stations [transmit] transmits a plurality of

generation instructions to at least one ultimate receiver station, and wherein said at least

ultimate receiver station [one of receives, enables, and presents] outputs a television

programming presentation in accordance with said plurality of generation instructions,

said method further comprising the step of transmitting [said television programming] to

said ultimate receiver [station.] station television programming to be presented with said

television programming presentation.

40. (Amended) The method of claim 8, further comprising the steps of:

receiving, [at said at least one origination station,] in said network, a class of data

to be [stored at said one of said transmitter station and said receiver station;] processed at

said plurality of intermediate transmission stations; and

[transmitting] <u>distributing</u> said class of data to said plurality of intermediate transmission stations.

41. (Amended) The method of claim 8, where said communications control signal includes [one of a schedule and an intermediate generation set.] <u>an instruct to embed.</u>

42. (Amended) The method of claim 8, wherein said at least one generation control signal enables <u>each of</u> said plurality of intermediate transmission stations to transmit a plurality of generation instructions to at least one ultimate receiver station, and wherein <u>each</u> said at least <u>one</u> ultimate receiver station [one of receives, enables, and presents] <u>outputs a</u> television programming <u>presentation</u> in accordance with said plurality of generation instructions, said method further comprising the step of [transmitting said] <u>transmitting, to each said at least one ultimate receiver station,</u> television programming [from one of (1) said at least one origination station and (2) said transmitter station.] <u>to be outputted with said television programming presentation.</u>

43. (Amended) A method of communicating and controlling at least one of the reception and presentation of programming in a network, said network including a programming origination station, an intermediate transmission station, and at least one subscriber station, said intermediate transmission station including a receiver [for receiving first programming and control signals from said programming origination station] and a transmitter [for transmitting said first programming and at least one of said control signals to said at least one subscriber station], and [said] at least one subscriber

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station including at least one output device [for presenting said first programming in accordance with said at least one of said control signals], said method comprising the steps of:

storing computer program code at said intermediate transmission station [in respect] <u>related</u> to [said] first programming;

inputting to a computer at said intermediate transmission station data [in respect] <u>related</u> to said first programming;

transmitting [at least] a first [of said] control <u>signal</u> [signals] to said intermediate transmission station;

detecting said [at least said] first [of said] control <u>signal</u> [signals] at said intermediate transmission station and passing said [at least said] first [of said] control <u>signal</u> [signals] to said computer;

executing said stored computer program code in response to said [at least said] first [of said] control <u>signal</u> [signals];

generating downloadable computer program code by processing said data under control of said stored computer program code;

transmitting said downloadable computer program code to said at least one subscriber station in response to a second control signal [of said at least one of said control signals];

transmitting said first programming to said intermediate transmission station;

receiving said first programming at said intermediate transmission station;

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transmitting [said at least one control signals] a third control signal and said first

programming from said intermediate transmission station to said at [lest] least one

subscriber station; and

causing one of said at least one subscriber station, under control of said generated

downloadable computer program code, to at least one of receive and present second

programming with said first programming [and second programming] at said at least one

output device, wherein said [at least one control signals] third control signal executes said

downloadable computer code at said subscriber station.

44.   (Amended)   A method of communicating signals in a communications

network, said communications network including at least one origination station and a

plurality of intermediate transmission stations, each of said intermediate transmission

stations having a receiver, at least one signal generator operatively connected to said

receiver, [for generating and transferring a signal to] a transmitter, an automatic control

unit operatively connected to said at least one signal generator, and a detector operatively

connected to said automatic control unit, wherein each said automatic control unit is

[being] programmed to perform in a station-specific fashion, [for detecting at least one

instruction, each automatic control unit programmed to perform in a fashion that is

specific to the intermediate transmission station to which said automatic control unit

belongs, wherein said fashions cause at least one of (a) second signal information

content, of a second signal, generated at each one of said plurality of intermediate

transmission stations to be different from second signal information content, of said

second signal, generated at other ones of said plurality of intermediate transmission

stations, and (b) at least one of (i) a generation of third signal information content of a third signal, at each intermediate transmission station, to occur at a first time that is different at each intermediate transmission station, and (ii) a transmission of said third signal information content, at each intermediate transmission station, to occur at a second time that is different at each intermediate transmission station,] said method comprising the steps of:

transmitting <u>information content of</u> at least one first signal from said at least one origination station, said <u>information content of</u> at least one first signal including at least one generation instruction;

transmitting <u>information content of</u> at least one transmission [instruction] <u>control signal</u> from said at least one origination station;

receiving at each one of said plurality of intermediate transmission stations said <u>information content of</u> at least one first signal;

detecting, at each one of said plurality of intermediate transmission stations, said at least one generation instruction;

receiving, at each one of said plurality of intermediate transmission stations, said <u>information content of</u> at least one transmission [instruction;] <u>control signal;</u>

passing, at each one of said plurality of intermediate transmission stations, said <u>at least one</u> generation instruction [and said transmission instruction] to said automatic control unit;

generating, at each one of said plurality of intermediate transmission stations, in accordance with said generation instruction, [and said fashion that is specifc to said each

one, at least one of (i) said] <u>information content of a</u> second signal [information content and (ii) said third signal information content];

transferring, at each one of said plurality of intermediate transmission stations, to said transmitter in accordance with said transmission <u>control signal,</u> [instruction, said at least one of said second signal information content and] said [third signal] information content[,] <u>of a second signal</u> in <u>a</u> [said] second signal [and in said third signal, respectively]; and

transmitting from each intermediate transmission station of said plurality of intermediate transmission stations, [in accordance with said fashion that is specifc to said each one, said at least one of said second signal information content and said third signal information content, in said second signal and in said third signal, respectively] <u>said second signal, such that the transmission time of said second signal when transmitted from a first of said plurality of intermediate transmission stations is different from the transmission time of said second signal when transmitted from a second of said plurality of intermediate transmission stations.</u>

45.   (Amended)   The method of claim 44, wherein said generation instruction instructs each of said plurality of intermediate transmission stations to generate <u>microprocessor instructions</u> [software] and said automatic control unit is programmed with data of at least one of (i) at least one formula and (ii) at least one item to be generated[, said method further comprising the steps of:

transmitting an instruction from said at least one origination station which is effective at said plurality of intermediate transmission stations to at least one of (a)

generate said data of at least one of (i) at least one formula and (ii) at least one item based on information stored at each of said plurality of intermediate transmission stations, (b) at least one of place said at least one of (i) at least one formula and (ii) at least one item in at least one of higher language code and a software module, (c) at least one of compile and link said generated software, and (d) generate machine language code based on said data of at least one of (i) at least one formula and (ii) at least one item].

46.   (Amended)   The method of claim 44, wherein said automatic control units are programmed to respond to said at least one generation instruction at different times[, said method further comprising the step of programming at least one receiver station in said network to assemble code in response to said at least one first signal].

47.   (Amended)   The method of claim 44, wherein said at least one first signal contains mass medium programming, said method further comprising the steps of:

[receiving a control signal which operates at said plurality of intermediate transmitter stations to communicate said mass medium programming to said transmitter] communicating said mass media programming to said transmitter based on receipt of said transmission control signal; and

retransmitting said mass medium programming from each of said plurality of intermediate transmission stations at a time that is different at each intermediate transmission station.

48.   (Amended)   The method of claim 44, [wherein each intermediate transmission station includes at least one selective transfer device and each automatic control unit is programmed with information of at least one of the operating speeds,

connections, and capacities of said at least one selective transfer device, said method]

further comprising the step of transmitting from [said at least one] a second origination

station an instruct signal that causes at least one of said plurality of intermediate

transmission stations to [perform one of (1) storing different ones of said at least one]

store a second generation instruction and [said at least one] a second transmission

instruction [at different ones of said at least one selective transfer device and (2) storing

said at least one generation instruction and said at least one transmission instruction in a

specific order].

49.   (Amended)   The method of claim 48, [wherein the at least one selective

transfer device at each intermediate transmission station comprises a computer and a

memory.] further comprising the step of transmitting said second generation instruction

from said second origination station.

50.   (Amended)   The method of claim [44, wherein each automatic control

unit is programmed to control at least one storage device, said method further comprising

the step of instructing different ones of said plurality of intermediate transmission stations

to store and retransmit different ones of said at least one generation instruction and said at

least one transmission instruction.] 47, wherein said mass medium programming includes

audio.

51.   (Amended)   The method of claim 44, wherein each of said plurality of

intermediate transmission stations further has a switch and an automatic control unit that

is programmed to control said switch[, said method further comprising the step of

instructing different ones of said plurality of intermediate transmission stations each to

cause said switch to communicate said at least one first signal and said second signal at at least one of different times and on different channels from one another].

52.   (Amended)   The method of claim 44, wherein each of said plurality of intermediate transmission stations retransmits programming [on a plurality of channels], said method further comprising the step of [instructing different ones of said plurality of intermediate transmission stations to transmit a specific one of said at least one first signal on different channels.] transmitting said programming from said at least one origination station to said plurality of intermediate transmission stations.

53.   (Amended)   The method of claim [44, wherein a signal for comparison designates at least one of said at least one generation instruction and said at least one transmission instruction, said method further comprising the step of causing different ones of said plurality of intermediate transmission stations to retransmit at least a portion of said at least one first signal at at least one of different times and on different channels based on said signal for comparison.] 46, wherein at least one of said plurality of intermediate transmission stations is programmed to receive at least one generation instruction from a local source.

55.   (Unchanged) The method of claim 44, wherein a retransmission control signal instructs said plurality of intermediate transmission stations to retransmit immediately, said method further comprising the step of selecting at least one of said at least one generation instruction and said at least one transmission instruction to store and retransmit.

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56.   (Amended)   The method of claim [44, wherein each automatic control unit is programmed to organize at least a portion of said at least one generation instruction and said at least one transmission instruction in a specific order, said method further comprising the step of causing different ones of said plurality of intermediate transmission stations to organize said at least one generation instruction and said at least one transmission instruction in different orders.] 52, wherein said programming includes said second signal.

57.   (Amended)   The method of claim [44, wherein each automatic control unit is programmed to place at least one of at least one datum and a control instruction in at least a portion of said at least one first signal, said method further comprising the step of causing different ones of said plurality of intermediate transmission stations to place different ones of said at least one of said at least one datum and said control instruction.] 56, wherein at least a portion of said second signal is embedded in the normal transmission location of said programming.

58.   (Amended)   The method of claim [44, further comprising the step of documenting the transmission of at least one of at least a portion of said at least one first signal, at least a portion of said second signal, and at least a portion of said third signal from at least one of said plurality of intermediate transmission stations.] 57, wherein said programming includes audio.

59.   (Amended)   The method of claim [44, further comprising the step of transmitting, from said plurality of intermediate transmission stations to a remote data collection station, at least one datum of an availability of said one of said at least one of

said second signal and said third signal in said network.] <u>45, further comprising the step</u>

<u>of at least one compiling and linking said microprocessor instructions.</u>

60. (Unchanged) The method of claim 44, further comprising the step of

transmitting at least one of a signal for comparison and at least one retransmission control

signal from a first one of said plurality of intermediate transmission stations.

61. (Amended) A method of communicating signals in a communications

network, said communications network including at least one origination station and a

plurality of intermediate transmission stations, each of said <u>plurality of</u> intermediate

transmission stations having a transmitter, a receiver, at least one signal generator that is

operatively connected to said receiver [for generating signal information content and

transferring a signal containing said signal information content to said transmitter], an

automatic control unit operatively connected to said signal generator, and a detector

operatively connected to said automatic control unit [for detecting at least one

instruction], each automatic control unit being programmed to perform in a station

specific fashion, said method comprising the steps of:

[generating] <u>originating</u> [at least one] <u>a first</u> generation instruction at said at least

one origination station that instructs each of said plurality of intermediate transmission

stations to generate <u>processor instructions</u> [said signal information content] in accordance

with said [at least one] <u>first</u> generation instruction [and to transfer said signal containing

said signal information content to said transmitter of each of said plurality of intermediate

transmission stations]; [and]

originating a second generation instruction at said at least one origination station

that instructs each of said plurality of intermediate transmission stations to generate a

signal including said processor instructions in accordance with said second generation

instruction;

transmitting said first generation instruction; and

transmitting said [at least one] second generation instruction.

Appendix B

2. A method of communicating	Page 11, lines 5 - 10	The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
and controlling	Page 59, lines 29 - 33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
receiving and presenting programming	For example, page 20, lines 16 - 19	TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.
in a network, said method comprising the steps of:	Page 375, lines 4 - 6	The station of Fig. 6 receives said network transmission at receiver, 53, and retransmits said transmission immediately via modulator, 83.
inputting to a computer at an intermediate transmission station data related to said programming;	Page 375, lines 13 - 20	Prior to a particular early time, complete local-formula-and-item information is inputted to and caused to be recorded at the computer, 73, of each controlled intermediate transmission station in such a way that each computer, 73, contains complete information relevant to the particular discounts and specials in effect at the particular markets in the vicinity of said station and at the particular time of the network transmission of Q.
	Page 376, lines 8 - 14	For example, said local-formula-and-item information in example #10 includes: a is 1000.00 p is .00625 q is .12
transmitting a first downloadable code related to said programming to said intermediate transmission station;	Page 377, lines 26 - 35	Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter-monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set- information message (#10)".)
	Page 357, lines 21-35	Any given intermediate generation set contains generally applicable information of the particular program instruction set whose generation it causes. Generally applicable information is specific. For example, the generally applicable information of the intermediate generation set of the programming of Q includes binary sound image information of a particular announcer's voice saying, "forty-three", "forty-five", "forty-six", "low-salt Vindaloo", "Mild version Quick",

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		and "Hot version Quick". And any given datum of generally applicable information may be specific information only of selected subscriber stations. Yet such information is generally applicable at any given transmission station because any given datum may be applicable at any or all of the subscriber stations of said transmission station.
detecting the presence of said first downloadable code at said intermediate transmission station and passing said detected first downloadable code to said computer;	Page 378, lines 4 - 6; Figs. 6A-6B	Transmitting said generate-set-information message (#10) causes said dedicated decoders to detect and input said message to the computers, 73, of said stations.
generating a second downloadable code by processing said inputted data under control of said first downloadable code;	Page 378, lines 4-23	Transmitting said generate-set-information message (#10) causes said dedicated decoders to detect and input said message to the computers, 73, of said stations. Receiving said message at said computers, 73, causes each of said computers, 73, to load information of said intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes each of said computers, 73, to execute the information so loaded as a machine language job; to compute the specific formula-and-item-of-this-transmission-information of said computer, 73, in the predetermined fashion of said intermediate generation set according to the prerecorded data of the local-formula-and-item information of said computer, 73; to compile said specific formula-and-item-of-this-transmission information into one or more specific machine language program modules; and to link said specific module or modules to other program modules to become complete program instruction set information of this instance of the network transmission of Q; and to record said information at particular memory.
	Page 379, lines 5 - Page 380, line 5	At the station of Fig. 6, for example, executing the information of said intermediate generation set causes the computer, 73, in precisely the fashion that applied in example #9, to compute the value of a particular variable b to be 62.21875; to computes the value of a particular variable c to be 2.117; and to replaces particular variable values, a, b, and c, in a particular so-called "higher language line of program code" to become formula-and-item-of- this-transmission information of: $Y = 1000.00 + 62.21875 + (2.117 * X)$ to select, compute, and replace other variable information until complete program instruction set information exists in higher language code at particular memory; to compile said higher language information; to link the information so complied with other compiled information; and to record the information so computed, compiled, and linked (which is complete information the program instruction set of Q of the station of Fig. 6) in a file named "PROGRAM.EXE", in a fashion well known in the art, on a computer memory disk of computer, 73. In so doing, said computer, 73, generates the specific program instruction set version--that is, the program instruction set of Q.1--that applies to the particular discounts and specials in effect at the particular markets in the vicinity

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		of said station and at the particular time of the network transmission of Q. In precisely the fashion that applied in example #9, executing the information of said intermediate generation set causes said computer, 73, to select data, from among the local-formula-and-item information of said station, including the aforementioned "Nabisco Zweiback Teething Toast" and the street address of every one of said supermarket chain's markets in the local vicinity of the station of Fig. 6, and to record said selected data on said memory disk in a data file named DATA_OF.ITS. In so doing, said computer, 73, generates said data module set of Q.1.
transmitting said second downloadable code to at least one receiver station; and	Page 385, lines 9 - 16	Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program-instruction-set message (#10)", ...
	Page 484, lines 7-18	Receiving the specific program-instruction-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the PROGRAM.EXE information in said message at particular RAM and execute the information so loaded as a machine language job. At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205,the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
	Page 382, lines 1 - 5	Executing said instruction information causes said computers, 73, each to load the information of said files, PROGRAM.EXE and DATA_OF.ITS, at particular program-set-to- transmit and data-set-to-transmit RAM memories of computer, 73, ...
causing said at least one receiver station to	Page 484, lines 12 - 18	At the station of Figs. 7 and 7F, receiving the program-instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
	Page 485, lines 14 - 18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion.
	Page 486, lines 20 - 27	Automatically, microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM

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		information is transmitted to said screen.
	Page 491, lines 10 - 13	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information.
	Page 495, lines 21 - 27	Automatically, microcomputer, 205, transmits to printer, 221, particular print information (that is ... part of said program instruction sets of Q.1 ...
receive and present information to perform one of completing	Page 491, lines 13 - 16	And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
	For example, page 20, lines 16 – 19. See Figs. 7 and 7F.	TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.
and supplementing	Page 495, lines 21 - 27	Automatically, microcomputer, 205, transmits to printer, 221, particular print information (that is ... part of said program instruction sets of Q.1 ...
	Page 496, lines 12 – 13 *et seq.*	At printer, 221, the printed so-called "hard copy" of said offer and coupon information emerges as:
said programming	Page 490, lines 11 - 23	Said studio transmits television picture information of the upper torso of a person and audio information of an announcer saying, "For a limited time only, Super Discount Supermarkets make this special offer to you. Super Discount Supermarkets will deliver to you, at cost, all the pork you need to entertain five hundred people for this low, low price ... " Said studio transmits television picture information of the right hand and arm of said person pointing moving to point at the upper left hand corner of the television screen.
	Page 494, lines 28 - 34	Meanwhile, as said studio continues to transmit television picture information of the person pointing to the upper left hand corner of the television screen, said studio transmits audio information of an announcer saying, "To confirm this very special limited offer to you in writing, we are now printing, at your printer ..."
under control of said generated second downloadable code.	Page 485, lines 14 - 18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion.
	Page 486, lines 20 - 27	Automatically, microcomputer, 205, clears video RAM; causes the background color of video RAM to be a color such as black that is transparent when combined with transmitted video by the PC-MicroKey System; causes binary image information of "$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM

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		information is transmitted to said screen.
	Page 495, line 34 - page 496, line 7	Automatically, microcomputer, 205, transmits additional print information of said program instruction set of Q.1 to printer, 221, causing printer, 221, to print: "in exchange for this coupon and the sum of" and "$". Automatically, microcomputer, 205, selects information of the aforementioned 1071.32 at said 2nd working memory and transmits said information to printer, 221, causing printer, 221, to print: "1,071.32". Automatically, microcomputer, 205, transmits additional print information of said program instruction set of Q.1 ..."

3. A method of communicating	Page 11, lines 5 - 10	The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
signals	Page 13, lines 25 - 28	The present invention employs signals embedded in programming. Embedded signals provide several advantages. They cannot become separated inadvertently from the programming and, thereby, inhibit automatic processing.
in a communications network, said communications network including at least one origination station and a plurality of intermediate transmission stations, each of said plurality of intermediate transmission stations having	Page 374, lines 20 - 31	In the present invention, a remote network origination and control station, such as the aforementioned program originating studio that originates the transmission of the "Wall Street Week" program, can control a plurality of intermediate transmission stations in generating and embedding combined medium control instructions--that is, program instruction sets, data module sets, and combining synch commands--that control generating and transmitting at pluralities of ultimate receiver stations. An example #10, focuses on combined medium network control of intermediate transmission stations, controlling ultimate receiver stations.
	Page 324, lines 8 - 21	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming. The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
a receiver,	Page 381, lines 14 - 16	... said network transmission (which the station of Fig. 6 and said second station each receives at a receiver, 53, ...

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at least one signal generator operatively connected to said receiver,	Page 354, lines 18 – 24.	Fig. 6 shows ... signal generators, 82, 86, and 90, also well known in the art, that computer, 73, can cause to embed SPAM information as required.
	Page 382, lines 1 – 7. See Figs. 6A and 6B.	... causes said computers, 73, ... each to cause a generator, 82, to ... transmit information of a SPAM end of file signal.
	Page 381, line 12 – Page 382, line 7; *See* Figs. 6A and 6B.	... at a time when all controlled intermediate transmission stations are receiving ... said network transmission (which the station of Fig. 6 and said second station each receives at a receiver, 53, ...), said program originating studio embeds in the normal transmission location of said transmission and transmits a second SPAM message. ... Transmitting said message causes the decoders of the signal processing systems, 71, of said stations that receive programming transmissions from the distribution amplifiers, 63, to ... input said message to the computers, 73, of said stations. Receiving said message causes each of said computers, 73, to load said information segment instruction information at particular RAM. Then receiving said end of file signal causes each of said computers, 73, to execute the instruction information of so loaded as an compiled, machine language job. Executing said instruction information causes said computers, 73, each to load the information of said files, PROGRAM.EXE and DATA_OF.ITS, at particular program-set-to- transmit and data-set-to-transmit RAM memories of computer, 73, and each to cause a generator, 82, to cease embedding any other signal information in the normal transmission location and to transmit information of a SPAM end of file signal.
a transmitter,	Page 325, lines 1 – 3	... apparatus that outputs said transmissions over various channels to the cable system's field distribution system, 93, which apparatus includes cable channel modulators, 83, 87, and 91, and channel combining and multiplexing system, 92.
	Page 381, lines 12 - 16	... at a time when all controlled intermediate transmission stations ... and retransmitting said network transmission (which the station of Fig. 6 and said second station each ... transmits via a modulator, 83), ...
an automatic control unit operatively connected to said at least one signal generator,	Page 326, lines 19 - 20	Cable program controller and computer, 73, is the central automatic control unit for the transmission station.
	Page 354, lines 18 - 24	Fig. 6 shows ... signal generators, 82, 86, and 90, also well known in the art, that computer, 73, can cause to embed SPAM information as required.
	Page 375, lines 15 - 16	... at the computer, 73, of each controlled intermediate transmission station ...
	Page 382, lines 1 - 7	... causes said computers, 73, ... each to cause a generator, 82, to ... transmit information of a SPAM end of file signal.

and a detector operatively connected to said at least one signal generator, said method comprising the steps of:	Page 325, line 34 - page 326, line 18. See Fig. 2D and "digital detectors" in Figs. 2A-2C.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission ... and transfers said selected messages, ... to code reader, 72. ... Code reader, 72, buffers and passes the received SPAM message information, ... to cable program controller and computer, 73.
	Page 381, lines 25 - 29	Transmitting said message causes the decoders of the signal processing systems, 71, of said stations that receive programming transmissions from the distribution amplifiers, 63, to detect and input said message to the computers, 73, of said stations.
transmitting a an information transmission, including at least one generation instruction and at least one instruct signal from said at least one origination station,	Page 377, lines 26 - 35	Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter-monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set- information message (#10)".)
	Page 385, lines 3 – 8	Then said program originating studio embeds in the normal transmission location of said transmission and transmits a SPAM message that is addressed to ITS computers, 73, and that contains execution and meter-monitor segments. (Said message is called, hereinafter, the "transmit-and- execute-program-instruction-set message (#10)".)
	Page 377, lines 34 - 35	(Hereinafter, said message is called the "generate-set-information message (#10)".)
	Page 385, lines 7 - 10	(Said message is called, hereinafter, the "transmit-and-execute-program-instruction-set message (#10)".) Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message ...
	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
	Page 377, lines 26 - 30	Then the program originating studio at said network originating and control station, ... transmits a SPAM message that ... consists of ... a particular execution segment, ...
	Page 385, lines 3 - 6	Then said program originating studio ... transmits a SPAM message ... that contains execution and meter-monitor segments.

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	Page 47, line 35 - page 48, line 5	For any given command, the execution segment information of said command invokes, at each relevant subscriber station apparatus, the preprogrammed operating instructions uniquely associated with its particular binary value in particular comparing and matching fashions that are described more fully below.
receiving in each of said plurality of intermediate transmission stations said information transmission;	Page 377, lines 7 - 9; Figs. 6A-6B	... the computers, 73, of said controlled intermediate transmission stations are caused to receive information of a particular transmission.
	For example, page 378, line 7	Receiving said message at said computers, 73, causes ...
	Page 381, lines 12 - 19	... at a time when all controlled intermediate transmission stations are receiving ... said network transmission (which the station of Fig. 6 and said second station each receives at a receiver, 53, ...), said program originating studio embeds in the normal transmission location of said transmission and transmits a second SPAM message.
	For example, page 385, lines 9 - 10	Receiving said message causes each of said computers, 73, to ...
detecting in each of said plurality of intermediate transmission stations said at least one generation instruction and said at least one instruct signal	Page 378, lines 4 - 6; Figs. 6A-6B	Transmitting said generate-set-information message (#10) causes said dedicated decoders to detect and input said message to the computers, 73, of said stations.
	Page 381, lines 12 - 29	... at a time when all controlled intermediate transmission stations are receiving and retransmitting said network transmission (which the station of Fig. 6 and said second station each receives at a receiver, 53, and transmits via a modulator, 83), said program originating studio embeds in the normal transmission location of said transmission and transmits a second SPAM message. ... Transmitting said message causes the decoders of the signal processing systems, 71, of said stations that receive programming transmissions from the distribution amplifiers, 63, to detect and input said message to the computers, 73, of said stations.
	For example, page 385, lines 9 - 10	Receiving said message causes each of said computers, 73, to generate ...
	Page 381, lines 25 - 29	... causes the decoders of the signal processing systems, 71, of said stations ... to ... input said message to the computers, 73, of said stations.
generating in each of said plurality of intermediate transmission	Page 378, lines 7 – 25 (emphasis added)	Receiving said message at said computers, 73, causes each of said computers, 73, to load information of said intermediate generation set at particular RAM. Then

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stations a respective generated signal in accordance with said at least one generation instruction; and		receiving the end of file signal that ends said message causes each of said computers, 73, to execute the information so loaded as a machine language job; to compute the specific formula-and-item-of-this-transmission-information of said computer, 73, in the predetermined fashion of said intermediate generation set according to the prerecorded data of the local-formula-and-item information of said computer, 73; to compile said specific formula-and-item-of-this-transmission information into one or more specific machine language program modules; and to link said specific module or modules to other program modules to become complete program instruction set information of this instance of the network transmission of Q; and to record said information at particular memory. (Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of Q.1", ...
	Page 385, lines 9 - 34	Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory ... (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program- instruction-set message (#10)", ... Then, automatically, each of said computers, 73, selects ... information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; its retained meter-monitor information; any required padding bits; complete information of the program instruction set that is at its program-set-to transmit RAM memory; and information of a SPAM end of file signal. Said selected ... information ... is complete information of the particular program- instruction-set message (#10) of said computer, 73.
	Page 381, line 35 - page 382, line 5	... causes said computers, 73, each to load the information of said files, PROGRAM.EXE and DATA_OF.ITS, at particular program-set-to- transmit and data-set-to-transmit RAM memories of computer, 73, ...
transferring in each of said plurality of intermediate transmission stations said respective generated signal to said transmitter	Page 385, lines 9 - 13	Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93.
	Page 385, lines 24 - 27	Then, automatically, each of said computers, 73, selects and transmits to the generator, 82, of its station, information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; ...
based on at least one comparison performed by said automatic control unit,	Page 44, lines 14 - 25	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a header and an execution segment. With respect to any given command, its execution segment contains information that specifies the apparatus that said command addresses and

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		specifies a particular function or functions that said command causes said apparatus to perform. (Hereinafter, functions that execution segment information causes subscriber station apparatus to perform are called "controlled functions.")
	Page 47, line 35 - page 48, line 5	For any given command, the execution segment information of said command invokes, at each relevant subscriber station apparatus, the preprogrammed operating instructions uniquely associated with its particular binary value in particular comparing and matching fashions that are described more fully below.
	For example, page 101, lines 4 - 29	Receiving the header and execution segment of said first message causes SPAM-controller, 205C, to determine the controlled function or functions that said message instructs URS microcomputers, 205, to perform and to execute the instructions of said functions. Automatically, as said valve transfers information, SPAM-controller, 205C, selects the first H converted bits of said information and records said bits at particular SPAM-header-@205 register memory, then determines that said information at SPAM-header-@205 memory (which is the "01" header of the first message) does not match particular 11-header-invoking-@205 information that is "11". Not resulting in a match causes controller, 39, automatically to select the next X bits of said transferred binary information and record said bits at particular SPAM-exec-@205 register memory. Automatically SPAM-controller, 205C, compares the information at said SPAM-exec-@205 memory (which information is the execution segment of the first combining synch command) with preprogrammed controlled- function-invoking-@205 information. Said comparing results in a match with particular execute-at-205 information that causes SPAM-controller, 205C, to invoke particular preprogrammed load-run-and-code instructions that control the loading of particular binary information at the main RAM of microcomputer, 205; the running of the information so loaded; and the placing of particular identification code information at particular SPAM-controller memory.
	Page 378, lines 7 - 12	Receiving said message at said computers, 73, causes each of said computers, 73, to load information of said intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes each of said computers, 73, to execute the information so loaded as a machine language job; ...
wherein a first of said respective generation signals when generated by a first of said plurality of intermediate transmission stations is different from a second of said respective generated signals when generated by a second of said plurality of said plurality of intermediate transmission	Page 385, line 35 - page 386, line 6	(Receiving said message causes the apparatus of the intermediate station of Fig. 6 to transmit the program instruction set of Q.1 in the program-instruction-set message (#10) of said station and causes the apparatus of said second intermediate station to transmit the program instruction set of Q.2 in the program-instruction-set message (#10) of said second station.)

stations.		
	Page 378, lines 23 - 28	(Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of Q.1", signifying that said set is one version of complete program instruction set information of said instance of the network transmission of Q.)
	Page 379, lines 5 - 15	At the station of Fig. 6, for example, executing the information of said intermediate generation set causes the computer, 73, in precisely the fashion that applied in example #9, to compute the value of a particular variable b to be 62.21875; to computes the value of a particular variable c to be 2.117; and to replaces particular variable values, a, b, and c, in a particular so-called "higher language line of program code" to become formula-and-item-of- this-transmission information of: $Y = 1000.00 + 62.21875 + (2.117 * X)$
	Page 380, lines 7 - 23	(At said second intermediate transmission station, executing the information of said intermediate generation set causes the computer, 73, of said station to compute the values of variables b and c as 132.2362 and 2.0882 respectively; to replace variable values, a, b, and c, with formula-and-item-of-this-transmission information of: $Y = 1000.00 + 132.2362 + (2.0882 * X) \ldots$ [Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", signifying that said set is a second version of complete program instruction set information ...

4. A method of communicating signals in a communications network, said communications network including at least one origination station and a plurality of intermediate transmission stations, each of said plurality of intermediate transmission stations having a receiver, at least one signal generator operatively connected to said receiver, a transmitter, an automatic control unit operatively connected to said at least one signal generator, and a detector operatively connected to said at least one signal generator, said method comprising the steps of:	*See* support identified for the preamble to claim 3	
	Page 374, lines 32 - 33	In example #10, a particular program originating

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		studio ... the commercial of program unit Q ...
	Page 59, lines 29 - 33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Page 382, lines 17 - 27	Immediately after commencing to transmit said programming of Q, said studio embeds in the normal transmission location of the transmission of said programming ... a particular SPAM message is addressed to URS signal processors, 200, and that causes ultimate receiver stations to combine their microcomputers, 205, to the computer system of the transmission of said program originating studio. (Said message and the functioning that said message causes are described more fully below, and hereinafter, said message is called the "align-URS- microcomputers-205 message (#10)".)
(1) originating an information transmission at an origination station including at least one generation instruction	Page 377, lines 25-35	Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter-monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set- information message (#10)".)
to effect each of said plurality of intermediate transmission stations to generate processor instructions in accordance with said at least one generation instruction;	Page 378, lines 7-25	Receiving said message at said computers, 73, causes each of said computers, 73, to load information of said intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes each of said computers, 73, to execute the information so loaded as a machine language job; to compute the specific formula-and-item-of-this-transmission-information of said computer, 73, in the predetermined fashion of said intermediate generation set according to the prerecorded data of the local-formula-and-item information of said computer, 73; to compile said specific formula-and-item-of-this- transmission information into one or more specific machine language program modules; and to link said specific module or modules to other program modules to become complete program instruction set information of this instance of the network transmission of Q; and to record said information at particular memory. (Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of Q.1"
	Page 380, lines 7-23	(At said second intermediate transmission station, executing the information of said intermediate generation set causes the computer, 73, of said station to compute the values of variables b and c as 132.2362 and 2.0882 respectively; to replace variable values, a, b, and c, with formula-and-item-of-this-transmission information of: $$Y = 1000.00 + 132.2362 + (2.0882 * X)$$

		to process other variable information; and to compile, link, and record information at a particular peripheral memory unit of said computer, 73, in a file named "PROGRAM.EXE" that is the specific program instruction set of said second intermediate station. [Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", signifying that said set is a second version of complete program instruction set information of said instance of the network transmission of Q.]
(2) originating at least one transmission signal to effect each of said plurality of intermediate transmission stations to transmit said processor instructions in accordance with said at least one transmission signal;	Page 385, line 3 - Page 386, line 6	Then said program originating studio embeds in the normal transmission location of said transmission and transmits a SPAM message that is addressed to ITS computers, 73, and that contains execution and meter-monitor segments. (Said message is called, hereinafter, the "transmit-and- execute-program-instruction-set message (#10)".) Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program-instruction-set message (#10)", and all of said second messages are the "program-instruction-set messages (#10).") Automatically, each of said computers, 73, selects the information of said meter-monitor segment, adds particular information that identifies its station and the time of transmission, modifies the meter-monitor format field information to reflect said added information, and retains the received, added, and modified meter-monitor information. Then, automatically, each of said computers, 73, selects and transmits to the generator, 82, of its station, information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; its retained meter-monitor information; any required padding bits; complete information of the program instruction set that is at its program-set-to transmit RAM memory; and information of a SPAM end of file signal. Said selected and transmitted information that each of said computers, 73, transmits is complete information of the particular program-instruction-set message (#10) of said computer, 73. (Receiving said message causes the apparatus of the intermediate station of Fig. 6 to transmit the program instruction set of Q.1 in the program-instruction-set message (#10) of said station and causes the apparatus of said second intermediate station to transmit the program instruction set of Q.2 in the program-instruction-set message (#10) of said second station.)
	Page 484, lines 7-18	Receiving the specific program-instruction-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the PROGRAM.EXE information in said message at particular RAM and execute the information so loaded as a machine language job. At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder. 203. and causes decoder.

		203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
(3) transmitting said at least one generation instruction; and ,	Page 377, lines 25-35	Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter-monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set- information message (#10)".)
(4) transmitting said at least one transmission signal.	Page 385, lines 3-8	Then said program originating studio embeds in the normal transmission location of said transmission and transmits a SPAM message that is addressed to ITS computers, 73, and that contains execution and meter-monitor segments. (Said message is called, hereinafter, the "transmit-and- execute-program-instruction-set message (#10)".)

5. A method of communicating signals in a communications network, said communications network including at least one transmitter station including a transmitter, and a plurality of intermediate transmission stations, each of said plurality of intermediate transmission stations having a receiver, at least one signal generator operatively connected to said receiver, an automatic control unit operatively connected to said at least one signal generator, and a detector operatively connected to said at least one signal generator, said method comprising the steps of:	*See* support identified for the preamble to claim 3 and the following additional support: Page 534, lines 28-32	Each nation has a national intermediate transmission station that is identical to the intermediate station of Fig. 6 except that it transmits output information of several individual television channels to receiver stations via a satellite in geosynchronous orbit over Europe rather than via a cable field distribution system.
	Page 535, lines 18-22	Each local government has a local intermediate transmission station that is identical to the intermediate station of Fig. 6 and that transmits multiplexed output information of several separate television channels via a cable field distribution system.
	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message

		controls specific addressed apparatus at subscriber stations.
	Page 536, lines 5 - 6	... a particular European master network origination and control station ...
	Page 537, lines 6 - 10	... said European master network station ... embedded ... a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions.
	Page 537, lines 7 - 8	... embedded in the information of said master transmission, ...
(1) originating an information transmission including an instruct signal	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
	Page 536, lines 5 - 6	... a particular European master network origination and control station ...
	Page 13, lines 25 - 26	The present invention employs signals embedded in programming.
	Page 541, lines 29 - 34	Next said European master network station ... in the full frame video of said master transmission a SPAM message that is addressed to ITS computers, 73, of intermediate stations that are national stations and that contains information segment information of a particular national level intermediate generation set.
which is effective, at a transmitter station,	Page 541, line 34 - page 542, line 4	Receiving said message causes each national intermediate transmission station to input to and execute at its computer, 73, the information of said set. (The information of said set and the processing and functioning caused by executing said information are described more fully below.)
	Page 534, lines 28 - 32	Each nation has a national intermediate transmission station that is identical to the intermediate station of Fig. 6 except that it transmits output information of several individual television channels to receiver stations via a satellite in geosynchronous orbit over Europe ...
to generate at least one generation instruction to	Page 543, lines 20 - 29	In the mean time, executing their inputted information of said national level intermediate generation set causes the computers, 73, of said national intermediate stations each to generate information of a specific local level intermediate generation set in the fashion that receiving the intermediate generation set of Q caused different intermediate stations to compute and incorporate specific formula-and-item-of-this- transmission information into generally applicable information of the program instruction sets of Q.1 and Q.2 in example #10.
	Page 42, lines 8 - 11	(Hereinafter, instances of computer program information that cause intermediate transmission station apparatus to generate ... command information are called "intermediate generation sets.")

	Page 44, lines 14 - 18	A command is an instance of signal information that is addressed to particular subscriber station apparatus and that causes said apparatus to perform a particular function or functions. A command is always constituted of at least a header and an execution segment.
	Page 47, line 35 - page 48, line 5	For any given command, the execution segment information of said command invokes, at each relevant subscriber station apparatus, the preprogrammed operating instructions uniquely associated with its particular binary value in particular comparing and matching fashions that are described more fully below.
	For example, page 108, line 17 - page 109, line 5	As with the first message, receiving the header and execution segment of said second message causes controller, 39, to determine that said message is addressed to URS microcomputers, 205, and to transfer said second message accordingly. ... causes controller, 39, automatically to select the next X bits of said binary information immediately after said H bits, the execution segment of the second combining synch command, and record said X bits, in their order after conversion, at said SPAM-exec register memory. Then, automatically, by comparing the information at said SPAM-exec memory with said controlled-function-invoking information, controller, 39, determines that said information at memory matches particular preprogrammed this-message-addressed-to-205 information that invokes said transfer-to-205 instructions.
effect each respective one of said plurality of intermediate transmission stations to generate content of a second signal in accordance with said at least one generation instruction	Page 545, lines 3 - 11	Receiving the specific SPAM message of its national intermediate station causes the computer, 73, of each local intermediate station to execute the contained local level intermediate generation set of said message and to generate information of a specific program instruction set in the fashion that executing the intermediate generation set of Q caused different intermediate stations in example #10 to generate their specific program instruction sets of Q.1 or Q.2.
	Page 42, lines 8 - 11	(Hereinafter, instances of computer program information that cause intermediate transmission station apparatus to generate program instruction set information ... are called "intermediate generation sets.")
and transfer said second signal to said transmitter of said respective one of said plurality of intermediate transmission stations	Page 547, lines 19 - 26	In the fashion of example #9, each local intermediate station detects the particular SPAM message of its recorder, 76, at its decoder, 77, and receiving its particular message causes each station to embed and transmit end of file signal information then a particular first SPAM message that is addressed to URS microcomputers, 205, and that contains complete information of its particular program instruction set.
in accordance with at least one signal for comparison and	Page 547, lines 15-26	In due course, each recorder, 76, transmits prerecorded end of file information then a particular transmit-program-instruction-set SPAM message (#11) addressed to ITS computers, 73. In the fashion of example #9, each local intermediate station detects the particular SPAM message of its recorder, 76, at its

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		decoder, 77, and receiving its particular message causes each station to embed and transmit end of file signal information then a particular first SPAM message that is addressed to URS microcomputers, 205, and that contains complete information of its particular program instruction set.
based on at least one comparison performed by said automatic control unit of said respective one of said plurality of intermediate transmission stations;	Page 47, line 35 - page 48, line 5	For any given command, the execution segment information of said command invokes, at each relevant subscriber station apparatus, the preprogrammed operating instructions uniquely associated with its particular binary value in particular comparing and matching fashions that are described more fully below.
	Page 544, line 31 - page 545, line 11	... causes the computer, 73, of each national intermediate station to ... to transmit a particular SPAM message that is addressed to ITS computers, 73, and that contains information segment information of its specific local level intermediate generation set. Receiving the specific SPAM message of its national intermediate station causes the computer, 73, of each local intermediate station to ... in the fashion ... in example #10 ...
	For example, page 377, lines 28 - 35	... transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter- monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set- information message (#10)".)
	Page 17, lines 19 – 22. See Fig. 2E.	Fig. 2E illustrates one example of the composition of signal information and shows the initial binary information of a message that contains execution, meter-monitor, and information segments.
(2) originating a control signal	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
	Page 536, lines 5 - 6	... a particular European master network origination and control station ...
	Page 544, lines 23 - 30	... said European master network station embeds ... a SPAM message that is addressed to ITS, computers, 73, of intermediate stations that are national stations and that instructs said stations to embed and transmit their specific local intermediate sets.
which operates at said transmitter station to communicate said at least one generation instruction to a transmitter; and	Page 544, line 31 - page 545, line 2	Receiving said message causes the computer, 73, of each national intermediate station to embed in the normal location of its particular second television channel transmission and to transmit a particular SPAM message that is addressed to ITS computers, 73, and that contains information segment information of its specific local level intermediate generation set.

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(3) transmitting said information transmission,	Page 537, lines 6 - 10	... said European master network station transmits ... a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions.
said instruct signal	Page 541, lines 29 - 34	Next said European master network station transmits ... a SPAM message that is addressed to ITS computers, 73, of intermediate stations that are national stations and that contains information segment information of a particular national level intermediate generation set.
and said control signal.	Page 544, lines 23 - 30	... said European master network station ... transmits a SPAM message that is addressed to ITS, computers, 73, of intermediate stations that are national stations and that instructs said stations to embed and transmit their specific local intermediate sets.

6. A method of communicating signals in a communications network, said communications network including at least one origination station and a plurality of intermediate transmission stations, each of said plurality of intermediate transmission stations having a receiver, at least one signal generator operatively connected to said receiver, a transmitter, an automatic control unit operatively connected to said at least one signal generator, and a detector operatively connected to said at least one signal generator, said method comprising the steps of:	*See* support identified for the preamble to claim 3	
transmitting instructions from said at least one origination station, said instructions including at least one generation control signal;	Page 377, lines 26 - 35	Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter-monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set- information message (#10)".)
	Page 13, line 33 - page 14, line 2	In the present invention, the embedded signals contain digital information that may include addresses of specific receiver apparatus controlled by the signals and instructions that identify particular functions the signals cause addressed apparatus to perform.

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	Page 356, lines 13 - 17	(Hereinafter, an instance of computer program instructions that cause a computer, at an intermediate transmission station, to generate information of a program instruction set is called an "intermediate generation set.")
	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
transmitting data for processing from said at least one origination station;	Page 375, lines 28 - 34	... in the preferred embodiment, information that applies at all network stations at the time of any given transmission of a given program unit--for example, the undelivered per unit cost of pork bellies: a--is transmitted to all stations simultaneously in a SPAM message that causes each station to select and record properly said information.
	Page 14, line 35 - page 15, line 2	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.
	Page 374, lines 32 - 35	In example #10, a particular program originating studio transmits ... a network transmission and controls a plurality of intermediate transmission stations ...
receiving said instructions	Page 378, lines 7 - 8	Receiving said message at said computers, 73, causes each of said computers, 73, to ...
and said data for processing in each of said plurality of intermediate transmission stations,	Page 375, lines 27 - 34	... in any fashion that said computers, 73, can receive information. ... in a SPAM message that causes each station to select and record properly said information.
and detecting said at least one generation control signal ,	Page 378, lines 4 - 6	Transmitting said generate-set-information message (#10) causes said dedicated decoders to detect ... said message ...
wherein each of said plurality of intermediate transmission stations passes at least one of (1) said at least one generation control signal	Page 378, lines 4 - 6; Figs. 6A-6B	Transmitting said generate-set-information message (#10) causes said dedicated decoders to ... input said message to the computers, 73, of said stations.
and (2) said data for processing to said automatic control unit,	Page 375, lines 26 - 34	Local-formula-and-item information can be inputted to said computers, 73, ... in a SPAM message that causes each station to select and record properly said information.
and wherein each of said plurality of intermediate transmission stations generates a signal	Page 385, lines 9 - 16	... causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program- instruction-set message (#10)", ...

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	Page 381, line 35 - page 382, line 5	... causes said computers, 73, each to load the information of said files, PROGRAM.EXE and DATA_OF.ITS, at particular program-set-to- transmit and data-set-to-transmit RAM memories of computer, 73, ...
	Page 379, lines 21 - 31	... and to record the information so computed, compiled, and linked (which is complete information the program instruction set of Q of the station of Fig. 6) in a file named "PROGRAM.EXE", in a fashion well known in the art, on a computer memory disk of computer, 73. In so doing, said computer, 73, generates the specific program instruction set version--that is, the program instruction set of Q.1--that applies to the particular discounts and specials in effect at the particular markets in the vicinity of said station and at the particular time of the network transmission of Q.
	Page 380, lines 19 - 24	[Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", signifying that said set is a second version of complete program instruction set information of said instance of the network transmission of Q.]
	Page 385, line 24 - Page 386, line 3	Then, automatically, each of said computers, 73, selects and transmits to the generator, 82, of its station, information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; its retained meter-monitor information; any required padding bits; complete information of the program instruction set that is at its program-set-to transmit RAM memory; and information of a SPAM end of file signal. Said selected and transmitted information that each of said computers, 73, transmits is complete information of the particular program-instruction-set message (#10) of said computer, 73. (Receiving said message causes the apparatus of the intermediate station of Fig. 6 to transmit the program instruction set of Q.1 in the program-instruction-set message (#10) of said station
	Page 484, lines 7-18	Receiving the specific program-instruction-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the PROGRAM.EXE information in said message at particular RAM and execute the information so loaded as a machine language job. At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
by processing	Page 379, lines 5 - 13	At the station of Fig. 6, ... causes the computer, 73, in precisely the fashion that applied in example #9, to compute the value of a particular variable b to be 62.21875; to computes the value of a particular variable c to be 2.117; and to replaces particular variable values, ... b, and c, in a particular so-called "higher language line of program code" to

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		become formula-and-item-of- this-transmission information of:
	Page 380, lines 7 - 12	(At said second intermediate transmission station, ... causes the computer, 73, of said station to compute the values of variables b and c as 132.2362 and 2.0882 respectively; to replace variable values, ... b, and c, with formula-and-item-of-this-transmission information of:
stored data	Page 375, lines 13 - 22	Prior to a particular early time, complete local-formula-and-item information is inputted to and caused to be recorded at the computer, 73, of each controlled intermediate transmission station in such a way that each computer, 73, contains complete information relevant to the particular discounts and specials in effect at the particular markets in the vicinity of said station and at the particular time of the network transmission of Q. Thus each computer, 73, contains the specific values of ... p, q, d, Z, r, s, and dd of its specific station; ...
and said data for processing	Page 375, lines 29 - 32	... information that applies at all network stations at the time of any given transmission of a given program unit--for example, the undelivered per unit cost of pork bellies: a-- ...
	Page 375, lines 20 - 21	Thus each computer, 73, contains the specific values of a, ...
in accordance with said at least one generation control signal	Page 379, lines 5 - 8	At the station of Fig. 6, for example, executing the information of said intermediate generation set causes the computer, 73, in precisely the fashion that applied in example #9, to compute ...
	Page 380, lines 7 - 9	(At said second intermediate transmission station, executing the information of said intermediate generation set causes the computer, 73, of said station to compute ...
such that said signal when generated by a first of said plurality of intermediate transmission stations is	Page 379, lines 26 - 31	In so doing, said computer, 73, generates the specific program instruction set version--that is, the program instruction set of Q.1--that applies to the particular discounts and specials in effect at the particular markets in the vicinity of said station and at the particular time of the network transmission of Q.
	For example, page 379, line 15	$Y = 1000.00 + 62.21875 + (2.117 * X)$
different from said signal when generated by a second of said plurality of intermediate transmission stations.	Page 380, lines 19 - 24	[Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", signifying that said set is a second version of complete program instruction set information of said instance of the network transmission of Q.]
	For example, page 380, line 14	$Y = 1000.00 + 132.2362 + (2.0882 * X)$

7. A method of communicating signals in a	*See* support identified for the preamble of claim 3	

communications network, said communications network including at least one origination station and a plurality of intermediate transmission stations, each of said plurality of intermediate transmission stations having a receiver, at least one signal generator operatively connected to said receiver, a transmitter, an automatic control unit operatively connected to said at least one signal generator, and a detector operatively connected to said automatic control unit, wherein each said automatic control unit is programmed to perform in a station-specific fashion, said method comprising the steps of:		
(1) originating an information transmission including at least one generation control signal to effect	Page 377, lines 26 - 35	Then the program originating studio at said network originating and control station, embeds in said normal transmission location ... a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter- monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set- information message (#10)".)
	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
each of said plurality of intermediate transmission stations to generate a generation instruction	Page 378, lines 7 - 25	Receiving said message at said computers, 73, causes each of said computers, 73, to load information of said intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes each of said computers, 73, to execute the information so loaded as a machine language job; to compute the specific formula-and-item-of-this-transmission-information of said computer, 73, in the predetermined fashion of said intermediate generation set according to the prerecorded data of the local-formula-and-item information of said computer, 73; to compile said specific formula-and-item-of-this-transmission information into one or more specific machine language program modules; and to link said specific module or modules to other program modules to become complete program instruction set information of this instance of the network transmission of Q; and to record said information at particular memory. (Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the

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		"program instruction set of Q.1", ...
	Page 380, ll. 7-23	(At said second intermediate transmission station, executing the information of said intermediate generation set causes the computer, 73, of said station to compute the values of variables b and c as 132.2362 and 2.0882 respectively; to replace variable values, a, b, and c, with formula-and-item-of-this-transmission information of: $$Y = 1000.00 + 132.2362 + (2.0882 * X)$$ to process other variable information; and to compile, link, and record information at a particular peripheral memory unit of said computer, 73, in a file named "PROGRAM.EXE" that is the specific program instruction set of said second intermediate station. [Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", signifying that said set is a second version of complete program instruction set information of said instance of the network transmission of Q.]
	Page 380, lines 20 - 22	[Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", ...
by processing stored data in accordance with said at least one generation control signal; and	Page 378, lines 12 - 17	... to compute the specific formula-and-item-of-this-transmission-information of said computer, 73, in the predetermined fashion of said intermediate generation set according to the prerecorded data of the local-formula-and-item information of said computer, 73; ...
	Page 379, lines 5 - 15	At the station of Fig. 6, for example, executing the information of said intermediate generation set causes the computer, 73, in precisely the fashion that applied in example #9, to compute the value of a particular variable b to be 62.21875; to computes the value of a particular variable c to be 2.117; and to replaces particular variable values, a, b, and c, in a particular so-called "higher language line of program code" to become formula-and-item-of- this-transmission information of: $$Y = 1000.00 + 62.21875 + (2.117 * X)$$
	Page 380, lines 7 - 14	(At said second intermediate transmission station, executing the information of said intermediate generation set causes the computer, 73, of said station to compute the values of variables b and c as 132.2362 and 2.0882 respectively; to replace variable values, a, b, and c, with formula-and-item-of-this-transmission information of: $$Y = 1000.00 + 132.2362 + (2.0882 * X)$$
(2) transmitting said information transmission	Page 387, lines 19 - 21	Subsequently, said program originating studio ... transmits a further series of messages ...
including said at least one generation control signal.	Page 377, lines 26 - 35	Then the program originating studio at said network originating and control station, ... transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter-monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter,

		said message is called the "generate-set- information message (#10)".)

8. A method of communicating signals in a communications network, said communications network including at least one transmitter station including a transmitter, and a plurality of intermediate transmission stations, each of said plurality of intermediate transmission stations having a receiver, at least one signal generator operatively connected to said receiver, an automatic control unit operatively connected to said at least one signal generator, a detector operatively connected to said automatic control unit, wherein each said automatic control unit is programmed to perform in a station-specific fashion, said method comprising the steps of:	*See* support identified for the preamble to claim 3 and the following additional support: Page 534, lines 28-32	Each nation has a national intermediate transmission station that is identical to the intermediate station of Fig. 6 except that it transmits output information of several individual television channels to receiver stations via a satellite in geosynchronous orbit over Europe rather than via a cable field distribution system.
	Page 535, lines 18-22	Each local government has a local intermediate transmission station that is identical to the intermediate station of Fig. 6 and that transmits multiplexed output information of several separate television channels via a cable field distribution system.
(1) originating an information transmission including an instruct signal	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
	Page 536, lines 5 - 6	... a particular European master network origination and control station ...
	Page 13, lines 25 - 26	The present invention employs signals embedded in programming.
	Page 541, lines 29 - 34	Next said European master network station ... in the full frame video of said master transmission a SPAM message that is addressed to ITS computers, 73, of intermediate stations that are national stations and that contains information segment information of a particular national level intermediate generation set.

which is effective, at a transmitter station,	Page 541, line 34 - page 542, line 4	Receiving said message causes each national intermediate transmission station to input to and execute at its computer, 73, the information of said set. (The information of said set and the processing and functioning caused by executing said information are described more fully below.)
	Page 534, lines 28 - 32	Each nation has a national intermediate transmission station that is identical to the intermediate station of Fig. 6 except that it transmits output information of several individual television channels to receiver stations via a satellite in geosynchronous orbit over Europe ...
to generate at least one generation control signal	Page 543, lines 20 – 29 (emphasis added)	In the mean time, executing their inputted information of said national level intermediate generation set causes the computers, 73, of said national intermediate stations each to generate information of a specific *local level intermediate generation set* in the fashion that receiving the intermediate generation set of Q caused different intermediate stations to compute and incorporate specific formula-and-item-of-this- transmission information into generally applicable information of the program instruction sets of Q.1 and Q.2 in example #10.
which is effective to enable at least one of said plurality of intermediate transmission stations to generate a generation instruction	Page 545, lines 3 – 11 (emphasis added)	Receiving the specific SPAM message of its national intermediate station causes the computer, 73, of each local intermediate station to execute the contained local level intermediate generation set of said message and to generate information of a specific *program instruction set* in the fashion that executing the intermediate generation set of Q caused different intermediate stations in example #10 to generate their specific program instruction sets of Q.1 or Q.2.
by processing stored data	Page 545, lines 11 - 16	Executing the information of its local level set causes the computer, 73, of each local intermediate station to access its specific LOCAL.TAX and LOCAL.EMP files and to compute formula-and-item-of-this-transmission information of specific local income and property tax formulas and local employment subsidy formulas, ...
	Page 535, lines 22 - 31	At the computer, 73, of each local intermediate transmission station, in a file named LOCAL.TAX, is local-formula-and-item information of specific proposed tax formulas and items regarding, for example, income taxes that relate to farmers and property taxes that relate to farm land and equipment. And in a file named LOCAL.EMP is local-formula-and-item information of specific proposed employment subsidy formulas relating to local unemployed persons which formulas vary with respect to the specific education levels of the unemployed.
in accordance with said at least one generation control signal;	Page 545, lines 8 - 12	... in the fashion that executing the intermediate generation set of Q caused different intermediate stations in example #10 to generate their specific program instruction sets of Q.1 or Q.2. Executing the information of its local level set causes the computer, 73, of each local intermediate station to ...
	For example, Page 379, lines 5 – 9. Example #10	At the station of Fig. 6, for example, executing the information of said intermediate generation set causes the

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	extends from page 374 to page 390.	computer, 73, in precisely the fashion that applied in example #9, to compute the value of a particular variable b to be 62.21875; ...
	Page 363, line 34 - page 364, line 6	Executing the information of said intermediate generation set causes computer, 73, to generate said program instruction set in the following fashion. Automatically, computer, 73, selects information of each of the aforementioned variables, a, p, q, d, Z, r, s, and dd; computes the value of variable b, under control of intermediate generation set instructions of equation (2), to be 62.21875; ...
(2) originating a communications control signal	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
	Page 536, lines 5 - 6	... a particular European master network origination and control station ...
	Page 544, lines 23 - 30	... said European master network station embeds ... a SPAM message that is addressed to ITS, computers, 73, of intermediate stations that are national stations and that instructs said stations to embed and transmit their specific local intermediate sets.
which operates at said transmitter station to communicate said at least one generation control signal to a transmitter; and	Page 544, line 31 - page 545, line 2	Receiving said message causes the computer, 73, of each national intermediate station to embed in the normal location of its particular second television channel transmission and to transmit a particular SPAM message that is addressed to ITS computers, 73, and that contains information segment information of its specific local level intermediate generation set.
(3) transmitting said information transmission,	Page 537, lines 6 - 10	... said European master network station transmits ... a SPAM end of file signal and the aforementioned sequence of SPAM messages that contain operating system instructions.
said instruct signal	Page 541, lines 29 - 34	Next said European master network station transmits ... a SPAM message that is addressed to ITS computers, 73, of intermediate stations that are national stations and that contains information segment information of a particular national level intermediate generation set.
and said communications control signal.	Page 544, lines 23 - 30	... said European master network station ... transmits a SPAM message that is addressed to ITS, computers, 73, of intermediate stations that are national stations and that instructs said stations to embed and transmit their specific local intermediate sets.

9. The method of claim 3, wherein said at least one generation instruction instructs each of said plurality of	Page 378, line 4 - page 381, line 2	Transmitting said generate-set-information message (#10) causes said dedicated decoders to detect and input said message to the computers, 73, of said stations. Receiving said message at said computers, 73, causes each of said computers, 73, to load information of said

intermediate transmission stations to generate microprocessor instructions,		intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes each of said computers, 73, to execute the information so loaded as a machine language job; to compute the specific formula-and-item-of-this-transmission-information of said computer, 73, in the predetermined fashion of said intermediate generation set according to the prerecorded data of the local-formula-and-item information of said computer, 73; to compile said specific formula-and-item-of-this-transmission information into one or more specific machine language program modules; and to link said specific module or modules to other program modules to become complete program instruction set information of this instance of the network transmission of Q; and to record said information at particular memory. (Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of Q.1", signifying that said set is one version of complete program instruction set information of said instance of the network transmission of Q.) Executing the information of said intermediate generation set also causes each said computers, 73, to generate and record complete information of a data module set. (Hereinafter, the data module set generated at the station of Fig. 6 in example #10 is called the "data module set of Q.1", signifying that said set is one version of complete data module set information of said instance of the network transmission of Q.) In the preferred embodiment, executing said intermediate generation set at said early time causes said computers, 73, to record said program instruction set of Q and said data module set of Q information at non-volatile, disk memory.

At the station of Fig. 6, for example, executing the information of said intermediate generation set causes the computer, 73, in precisely the fashion that applied in example #9, to compute the value of a particular variable b to be 62.21875; to computes the value of a particular variable c to be 2.117; and to replaces particular variable values, a, b, and c, in a particular so-called "higher language line of program code" to become formula-and-item-of- this-transmission information of:

$$Y = 1000.00 + 62.21875 + (2.117 * X)$$ to select, compute, and replace other variable information until complete program instruction set information exists in higher language code at particular memory; to compile said higher language information; to link the information so complied with other compiled information; and to record the information so computed, compiled, and linked (which is complete information the program instruction set of Q of the station of Fig. 6) in a file named "PROGRAM.EXE", in a fashion well known in the art, on a computer memory disk of computer, 73. In so doing, said computer, 73, generates the specific program instruction set version--that is, the program instruction set of Q.1--that applies to the particular discounts and specials in effect at the particular markets in the vicinity of said station and at the particular time of the network transmission of Q. In precisely the fashion that applied in example #9, executing the information of said intermediate generation set causes said computer, 73, to select data, from among the local-formula-and-item information of said station,

		including the aforementioned "Nabisco Zweiback Teething Toast" and the street address of every one of said supermarket chain's markets in the local vicinity of the station of Fig. 6, and to record said selected data on said memory disk in a data file named DATA_OF.ITS. In so doing, said computer, 73, generates said data module set of Q.1. (At said second intermediate transmission station, executing the information of said intermediate generation set causes the computer, 73, of said station to compute the values of variables b and c as 132.2362 and 2.0882 respectively; to replace variable values, a, b, and c, with formula-and-item-of-this-transmission information of: $Y = 1000.00 + 132.2362 + (2.0882 * X)$ to process other variable information; and to compile, link, and record information at a particular peripheral memory unit of said computer, 73, in a file named "PROGRAM.EXE" that is the specific program instruction set of said second intermediate station. [Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", signifying that said set is a second version of complete program instruction set information of said instance of the network transmission of Q.] Executing the information of said intermediate generation set causes said computer, 73, also to select particular data, including said "Cheerios Toasted Oat Cereal" and the street address of every one of said supermarket chain's markets in the locality of said second intermediate station and to record said selected data at said memory unit in a data file named DATA_OF.ITS that corresponds in content to the file of the same name generated a the intermediate station of Fig. 6. [Hereinafter, the data module set generated at said second station is called the "data module set of Q.2", signifying that said set is a second version of complete data module set information of said instance of the network transmission of Q.])
	Page 24, lines 14 - 16	(Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
said method further comprising the step of including said microprocessor instructions in said respective generated signal at each of said plurality of intermediate transmission stations.	Page 385, line 3 - page 386, line 14	Then said program originating studio embeds in the normal transmission location of said transmission and transmits a SPAM message that is addressed to ITS computers, 73, and that contains execution and meter-monitor segments. (Said message is called, hereinafter, the "transmit-and- execute-program-instruction-set message (#10)".) Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program-instruction-set message (#10)", and all of said second messages are the "program-instruction-set messages (#10).") Automatically, each of said computers, 73, selects the information of said meter-monitor segment, adds particular information that identifies its station and the time of transmission, modifies the meter-monitor format field information to reflect said added information. and retains the

		received, added, and modified meter-monitor information. Then, automatically, each of said computers, 73, selects and transmits to the generator, 82, of its station, information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; its retained meter-monitor information; any required padding bits; complete information of the program instruction set that is at its program-set-to transmit RAM memory; and information of a SPAM end of file signal. Said selected and transmitted information that each of said computers, 73, transmits is complete information of the particular program-instruction-set message (#10) of said computer, 73. (Receiving said message causes the apparatus of the intermediate station of Fig. 6 to transmit the program instruction set of Q.1 in the program-instruction-set message (#10) of said station and causes the apparatus of said second intermediate station to transmit the program instruction set of Q.2 in the program-instruction-set message (#10) of said second station.) Receiving the information of the particular program-instruction-set message (#10) of the computer, 73, of its station causes a generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular program-instruction-set message (#10) of said station to said system, 93.
10. The method of claim 3, wherein said automatic control units are programmed	Page 326, line 25 - page 327, line 8	Computer, 73, has capacity for maintaining records on the station's programming schedule and records on the status of operating apparatus. Computer, 73, has means for receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98. Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information. Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, what kind of programming the unit is--eg., conventional television, television/computer combined medium programming, etc.-- and how the station should process the programming. Computer, 73, is preprogrammed to receive and record said schedule information and may record it in RAM or on an appropriate recording medium such as a magnetic disk at a disk drive.
	Page 377, lines 9 - 16	For example, at 3:00 AM on said night, automatic schedule information and instructions (previously inputted by a computer at said network originating and control station, via network, 98, individually to each of said computers, 73) causes said computers, 73, to cause their associated earth station receivers, 50, amplifiers, 51, and TV receivers, 53, to tune to a particular satellite transmission ...

to respond to said at least one generation instruction at different times.	Page 377, line 4 - page 378, line 28 (emphasis added)	At said early time (which time is, in the preferred embodiment, a time of reduced operational requirement such as, for example, the middle of the night that precedes said network transmission of Q), the computers, 73, of said controlled intermediate transmission stations are caused to receive information of a particular transmission. For example, at 3:00 AM on said night, automatic schedule information and instructions (previously inputted by a computer at said network originating and control station, via network, 98, individually to each of said computers, 73) causes said computers, 73, to cause their associated earth station receivers, 50, amplifiers, 51, and TV receivers, 53, to tune to a particular satellite transmission (while causing the switches, 75, to output information of said transmission to no modulator, 83, 87, or 91). Causing said station apparatus to tune to said transmission causes those particular dedicated decoders of the signal processor systems, 71, of said stations that process continuously the inputted transmission of the distribution amplifiers, 63, to detect SPAM information embedded in the normal transmission location of said transmission and input said SPAM information to the computers, 73, of said stations. Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter-monitor information, padding bits as required, information segment information of *the aforementioned intermediate generation set of Q,* and an end of file signal. (Hereinafter, said message is called the "generate-set- information message (#10)".) Except for its meter-monitor information, said generate-set-information message (#10) is identical to the aforementioned generate-set-information message (#9). Transmitting said generate-set-information message (#10) causes said dedicated decoders to detect and input said message to the computers, 73, of said stations. Receiving said message at said computers, 73, causes each of said computers, 73, to load information of said intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes each of said computers, 73, to execute the information so loaded as a machine language job; to compute the specific formula-and-item-of-this-transmission-information of said computer, 73, in the predetermined fashion of said intermediate generation set according to the prerecorded data of the local-formula-and-item information of said computer, 73; to compile said specific formula-and-item-of-this-transmission information into one or more specific machine language program modules; and to link said specific module or modules to other program modules to become complete program instruction set information of this instance of the network transmission of Q; and to record said information at particular memory. (Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of Q.1", signifying that said set is one version of complete program instruction set information of said instance of the network transmission of Q.)

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		Page 355, lines 15 - 32	Program units Q and D are delivered, organized to play, and played according to schedule in the automatic fashions described above but with certain variations. Computer, 73, is preprogrammed to process combined medium programming. When the aforementioned remote distribution station inputs information to computer, 73, via network, 98, regarding unit Q, said distribution station inputs information that Q is particular combined medium programming and instructs computer, 73, to commence particular program instruction set generation in a particular fashion at a particular time interval prior to the scheduled playing of Q. (Hereinafter, a particular instance of such a time period is called "interval," as in "interval Q" of unit Q.) Inputting said information and instructions causes Computer, 73, to record said information and instructions in its record keeping fashion together with the scheduled generation time which computer, 73, calculates as the scheduled play time minus interval Q.
		Page 342, lines 3 - 31	At a particular time on a particular day--for example, at 5 P.M. eastern standard time, on January 27, 1988--said remote distribution station commences contacting, individually and in turn in a fashion well known in the art, the computers, 73, of each of said intermediate station, via telephone or other data transfer network, 98 (which has capacity to communicate information individually between said remote station and each of said computers, 73). Said remote station inputs schedule information to each computer, 73. ... For example, in the case of the computer, 73, of the station of Fig. 6, said remote distribution station informs said computer, 73, to select and record program units Q, D, Y, and W; to transmit program unit Q at 2:30:30 PM eastern standard time, on January 29, 1988 on the cable channel transmitting the Cable News Network; ...
		Page 358, line 26 - page 360, line 2 (emphasis added)	At the aforementioned interval Q time prior to the scheduled playing of Q, particular preprogrammed preplay-and- generate instructions cause computer, 73, to commence said program instruction set generation. Said instructions cause computer, 73, to cause matrix switch, 75, to switch the input from recorder, 76, to no output; to cause recorder, 76, to position the start of unit Q at its play head; to cause decoder, 77, to commence detecting signals on all video lines from the beginning of the normal transmission pattern to the end of the last detectable line of the full video frame; then to cause recorder, 76, to commence playing which causes recorder, 76, to transmit and decoder, 77, to detect a particular SPAM message. (Hereinafter, said message is called the "generate-set-information message (#9)".) Said message is addressed to ITS computers, 73, and contains a particular execution segment, appropriate meter-monitor information, padding bits as required, an information segment whose information is the intermediate generation set of Q, and an end of file signal. (Hereinafter, the intermediate generation set that causes any given intermediate transmission station to generate a program instruction set of an instance of the transmission of the programming of program unit Q is called *the "intermediate*

		generation set of Q".) Detecting said message causes decoder, 77, to transmit said message to computer, 73, and receiving said message at computer, 73, causes particular SPAM decoder apparatus of computer, 73, (which apparatus is analogous to SPAM- controller, 205C, at microcomputer, 205, above and is not distinguished from computer, 73, hereinafter) to execute particular controlled functions. In the fashion of the first message of the "Wall Street Week" example at microcomputer, 205, computer, 73, is caused to load information of said intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes computer, 73, to execute particular additional instructions of said controlled functions. Executing said instructions, causes computer, 73, to cause recorder, 76, to cease playing and position the start of the unit Q conventional television programming at the play head of recorder, 76; to cause decoder, 77, to commence detecting information in the normal transmission location alone; to cause stripper, 81, and generator, 82, to prepare to commence stripping and embedding information, respectively, in the normal transmission location; and to execute the information of said intermediate generation set as a compiled, machine language job.
11. The method of claim 3, wherein at least a portion of said information transmission includes	Page 377, line 4 - page 378, line 3 (emphasis added)	At said early time (which time is, in the preferred embodiment, a time of reduced operational requirement such as, for example, the middle of the night that precedes said network transmission of Q), the computers, 73, of said controlled intermediate transmission stations are caused to receive information of a particular transmission. For example, at 3:00 AM on said night, automatic schedule information and instructions (previously inputted by a computer at said network originating and control station, via network, 98, individually to each of said computers, 73) causes said computers, 73, to cause their associated earth station receivers, 50, amplifiers, 51, and *TV receivers, 53,* to tune to a particular satellite transmission (while causing the switches, 75, to output information of said transmission to no modulator, 83, 87, or 91). Causing said station apparatus to tune to said transmission causes those particular dedicated decoders of the signal processor systems, 71, of said stations that process continuously the inputted transmission of the distribution amplifiers, 63, to detect SPAM information embedded in the normal transmission location of said transmission and input said SPAM information to the computers, 73, of said stations. Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter-monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set- information message

		(#10)".) Except for its meter-monitor information, said generate-set-information message (#10) is identical to the aforementioned generate-set-information message (#9).
mass medium	Page 1, lines 27 - 28	But television, radio, and broadcast print are only mass media.
programming, said method further comprising the steps of:	Page 11, lines 6 - 10	The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
	For example, page 377, lines 31 - 33	... information segment information of the aforementioned intermediate generation set of Q, ...
	For example, page 357, lines 21 - 35	Any given intermediate generation set contains generally applicable information of the particular program instruction set whose generation it causes. Generally applicable information is specific. For example, the generally applicable information of the intermediate generation set of the programming of Q includes binary sound image information of a particular announcer's voice saying, "forty-three", "forty-five", "forty-six", "low-salt Vindaloo", "Mild version Quick", and "Hot version Quick". And any given datum of generally applicable information may be specific information only of selected subscriber stations. Yet such information is generally applicable at any given transmission station because any given datum may be applicable at any or all of the subscriber stations of said transmission station.
receiving a control signal which operates at each of said plurality of intermediate transmitter stations to communicate said mass medium programming to said transmitter; and	Page 383, line 21 - page 384, line 29	Then said studio embeds in said transmission and transmits a SPAM message is addressed to ITS computers, 73, and that contains execution and meter-monitor segments. (Said message is called, hereinafter, the "transmit-data-module-set message (#10)".) Receiving said transmit-data-module-set message (#10) causes each of said computers, 73, to cause stripping and embedding to commence; to generate a particular first outbound SPAM message that includes information of the data file, DATA_OF.ITS, at its data-set-to-transmit RAM memory; ... (Hereinafter, the first outbound SPAM message of any given one of said computers, 73, is called a "data-module-set message (#10)" and all of said first messages are the "data- module-set messages (#10)".) At the station of Fig. 6, the computer, 73, automatically causes stripper, 81, station to commence stripping all signals from the normal transmission location; causes generator, 82, to commence embedding information received from said computers, 73; selects the information of the meter-monitor segment of said transmit- data-module-set message (#10); adds particular information that identifies the station of Fig. 6 and the time of transmission; modifies the meter-monitor format field information to reflect said added information; and retains the received, added, and modified meter-monitor information. Then said computer, 73, selects and transmits to generator, 82, complete information of its data-module-set message (#10) in the following fashion. Automatically, said computer, 73, selects and transmits information of a "01" header; information of a particular SPAM execution segment

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		that is addressed to URS microcomputers, 205; said retained meter- monitor information; any required padding bits (the requirement for and number which said computer, 73, determines in a predetermined fashion); complete information of the data file at the data-set-to-transmit RAM memory of said computer, 73, which is said file, DATA_OF.ITS and which is complete information of said data module set of Q.1; and information of a SPAM end of file signal. (Receiving said message at said second intermediate station causes the apparatus of said station, in the same fashion, to generate ... the data-module-set message (#10) of said station which includes meter-monitor information that identifies said second station and said data module set of Q.2.)
	Please note page 357, line 21 - page 358, line 21 (emphasis added)	Any given intermediate generation set contains generally applicable information of the particular program instruction set whose generation it causes. Generally applicable information is specific. For example, the generally applicable information of the intermediate generation set of the programming of Q includes binary sound image information of a particular announcer's voice saying, "forty-three", "forty-five", "forty-six", "low-salt Vindaloo", "Mild version Quick", and "Hot version Quick". And any given datum of generally applicable information may be specific information only of selected subscriber stations. Yet such information is generally applicable at any given transmission station because any given datum may be applicable at any or all of the subscriber stations of said transmission station. Said generally applicable information lacks specific information that is required to complete the generation of a given instance of a generated program instruction set. (For example, in the case of unit Q, the intermediate generation set lacks information of the particular discount formulas and items offered as cents-off coupon specials that apply at the scheduled time of the transmission of unit Q at the particular supermarket or markets that are local to the station of Fig. 6.) When executed at a computer, 73, that is preprogrammed with particular local-formula-and-item information (that is, particular data), the instructions of a given intermediate generation set (that is, of a given computer program) cause said computer, 73, to generate particular formula-and-item- of-this-transmission information and incorporate said information into said generally applicable information of said particular program instruction set, thereby generating the particular program instruction set instance applicable to a particular transmission at a particular intermediate transmission station. The set information so generated may consist of computer program instructions *and/or data.*
	Please note page 378, lines 28 - 35	Executing the information of said intermediate generation set also causes each said computers, 73, to generate and record complete information of a data module set. (Hereinafter, the data module set generated at the station of Fig. 6 in example #10 is called the "data module set of Q.1", signifying that said set is one version of complete data module set information of said instance of the network transmission of Q.)

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	Page 380, line 23 - page 381, line 2	Executing the information of said intermediate generation set causes said computer, 73, also to select particular data, including said "Cheerios Toasted Oat Cereal" and the street address of every one of said supermarket chain's markets in the locality of said second intermediate station and to record said selected data at said memory unit in a data file named DATA_OF.ITS that corresponds in content to the file of the same name generated a the intermediate station of Fig. 6. [Hereinafter, the data module set generated at said second station is called the "data module set of Q.2", signifying that said set is a second version of complete data module set information of said instance of the network transmission of Q.])
transmitting said mass medium programming from each of said plurality of intermediate transmitter stations.	Page 384, line 30 - page 385, line 2	Receiving the information of the particular data-module-set message (#10) of the computer, 73, of its station causes each generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular data-module-set message (#10) of said station to said system, 93.
	Page 482, line 32 - page 483, line 28	Receiving the specific data-module-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the DATA_OF.ITS information in said message in a particular file, named "DATA_OF.ITS" at so-called "RAM disk" memory of the microcomputer, 205, of said station. At the station of Figs. 7 and 7F, receiving the data-module-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which includes complete information of the aforementioned data file, DATA_OF.ITS, of said station). Executing said information causes microcomputer, 205, to place said complete information at a so-called "D:" RAM disk at the RAM of said microcomputer, 205, in a file entitled, at the directory of said disk, "DATA_OF.ITS". (... And the microcomputer, 205, at the station of said third subscriber [which station is a subscriber station of said second intermediate transmission station] receives the data- module-set message (#10) of said second intermediate station and is caused, in the same fashion, to place complete information the data file, DATA_OF.ITS, of said second intermediate station at the "D:" RAM disk at said microcomputer, 205, in a file also entitled "DATA_OF.ITS".)
	Page 488, lines 21 - 27	... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
	Page 489, lines 13 - 32	And the microcomputer, 205, at the station of said third subscriber computes information of the amount that said subscriber will save by buying an untrimmed pork belly unit by subtracting ... selects the audio information of an

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		announcer's voice saying "forty-three" from its file, D:DATA_OF.ITS; and places said information at said audio RAM.)
12. The method of claim 3, further comprising the step of transmitting from a second origination station a control signal which is effective to cause at least one of said plurality of intermediate transmission stations to store a second generation instruction and a second signal for comparison.	Page 344, line 23 - page 345, line 18	At 4 A.M. eastern standard time, on January 28, 1988 said remote distribution station commences transmitting programming by satellite up-link means, well known in the art. Said programming consists of a sequence of the program units of 26 spot commercials, each of thirty seconds duration. In succession, said station transmits units A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, and Z. Embedded in each of said program units are SPAM messages containing appropriate "program unit identification code" information and distance information. Separating the transmission of the end of each program unit and the commencement of the succeeding unit is a brief interval of time. Before transmitting the first program unit and, subsequently, in each one of said intervals, said distribution station transmits a SPAM message that contains execution and meter-monitor segments. Each message contains the same execution segment information that is addressed to ITS computers, 73, and instructs each computer, 73, to identify the information in the meter-monitor segment of said message, to compare said "code" information to the preprogrammed schedule information of said computer, 73, and if a match results, to select and record the programming of the program unit that follows said message, or if no match results, to not select and not record said programming. Each message contains meter-monitor "program unit identification code" information of the program unit that immediately follows. (Hereinafter, said messages are called individually the "select-A-message (#8)," the "select-B-message (#8)," the "select-C-message (#8)," and so forth up to the "select-Z- message (#8)," each message referring to the corresponding program unit: A, B, C, and so forth up to Z, respectively, ...
	Page 346, line 34 - page 347, line 5	Subsequently, receiving the select-Q-message (#8) causes said computer, 73, to determine that the "program unit identification code" information of unit Q matches preprogrammed schedule information which causes said computer, 73, to cause recorder, 76, to commence recording, thereby causing said recorder, 76, to record the programming of program unit Q which follows said select-Q-message (#8).
	Page 59, lines 29 - 33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Page 355, lines 15 - 17	Program units Q and D are delivered, organized to play, and played according to schedule in the automatic fashions described above but with certain variations.
	Page 356, line 28 - page 357, line 20	In the case of prerecorded programming, in the preferred embodiment, the information of any given

		intermediate generation set is prerecorded in a program unit with the conventional programming--for example, the conventional television or radio programming--into whose transmission is embedded the program instruction set whose generation said given intermediate set causes. And said intermediate set is prerecorded in said program unit before the start of said conventional programming. For example, in the case of television programming such as the programming of unit Q, the particular intermediate set that is inputted to computer, 73, is located on the recording medium of unit Q within the defined space of program unit Q immediately following the point at which unit Q starts and before the point at which the conventional television information of Q commences. Said intermediate generation set information is embedded in the so-called "full frame" video on each successive frame until complete information of said set information is embedded; that is, embedding of said set information commences at the first line of the normal transmission location and continues on each successive detectable line of a first frame and, continuing in this fashion, on each successive frame until all intermediate generation set information is embedded. The conventional television video and audio information of program unit Q are prerecorded in the conventional fashion, commencing at the frame immediately following the last frame in which intermediate generation set information is embedded.

13. The method of claim 12, [wherein said at least one selective transmission device comprises a computer and a memory.] further comprising the step of transmitting said second generation instruction from said second origination station.	See the support for claim 12.	

14. The method of claim 11, wherein said mass medium programming comprises audio.	See the support for claim 11.	

15. The method of claim 3, wherein said automatic control unit in each of said plurality of intermediate transmission stations is programmed to control a switch, said switch adapted to communicate an	Page 326, line 19 - page 327, line 8	Cable program controller and computer, 73, is the central automatic control unit for the transmission station. Computer, 73, has an installed clock and is preprogrammed with information on the operating speeds and capacities of all station apparatus and the connections of said apparatus with matrix switch, 75. Computer, 73, has capacity for maintaining records on the station's programming schedule and records on the status of operating apparatus. Computer, 73, has means for

information transmission transmitted from said at least one origination station, said method further comprising the step of transmitting an instruction from said at least one origination station which causes at least one of said intermediate transmission station to control its switch.		receiving input information from local input, 74, and from remote stations via telephone or other data transfer network, 98. Such input information can include the complete programming schedule of the station of Fig. 6, with each discrete unit of programming identified by its own "program unit identification code" information. Such input information can indicate when and how the station should expect to receive each program unit, when and on which channel or channels and how the station should transmit the unit, what kind of programming the unit is--eg., conventional television, television/computer combined medium programming, etc.-- and how the station should process the programming. Computer, 73, is preprogrammed to receive and record said schedule information and may record it in RAM or on an appropriate recording medium such as a magnetic disk at a disk drive.
	Page 328, lines 14 - 15	Computer, 73, has means for communicating control information with matrix switch, 75, ...
	Page 377, lines 4 - 18	At said early time (which time is, in the preferred embodiment, a time of reduced operational requirement such as, for example, the middle of the night that precedes said network transmission of Q), the computers, 73, of said controlled intermediate transmission stations are caused to receive information of a particular transmission. For example, at 3:00 AM on said night, automatic schedule information and instructions (previously inputted by a computer at said network originating and control station, via network, 98, individually to each of said computers, 73) causes said computers, 73, to cause their associated earth station receivers, 50, amplifiers, 51, and TV receivers, 53, to tune to a particular satellite transmission (while causing the switches, 75, to output information of said transmission to no modulator, 83, 87, or 91).

16. The method of claim 3, wherein each of said plurality of intermediate transmission stations transmits programming, said method further comprising the step of transmitting said programming from said at least one origination station to said plurality of intermediate transmission stations.	Page 469, line 35 - page 470, line 8	The program originating studio of a particular network transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." Said transmission is received at the intermediate transmission station of Fig. 6 and retransmitted immediately on the cable channel of modulator, 83. (Said transmission is also received at the aforementioned second intermediate transmission station of example #10 and retransmitted immediately.)
	Page 478, lines 23 - 26	Then said studio ceases transmitting "Exotic Meals of India" programming for a so-called "commercial break" and commences transmitting the conventional television video and audio information of program unit Q.

| 17. The method of claim 10, wherein at least one of said plurality of intermediate transmission stations is programmed to receive said at least one generation instruction from a local source. | Page 355, lines 15 - 32 | Program units Q and D are delivered, organized to play, and played according to schedule in the automatic fashions described above but with certain variations.

Computer, 73, is preprogrammed to process combined medium programming. When the aforementioned remote distribution station inputs information to computer, 73, via network, 98, regarding unit Q, said distribution station inputs information that Q is particular combined medium programming and instructs computer, 73, to commence particular program instruction set generation in a particular fashion at a particular time interval prior to the scheduled playing of Q. (Hereinafter, a particular instance of such a time period is called "interval," as in "interval Q" of unit Q.) Inputting said information and instructions causes Computer, 73, to record said information and instructions in its record keeping fashion together with the scheduled generation time which computer, 73, calculates as the scheduled play time minus interval Q. |
| | Page 358, line 26 - page 360, line 2 | At the aforementioned interval Q time prior to the scheduled playing of Q, particular preprogrammed preplay- and- generate instructions cause computer, 73, to commence said program instruction set generation. Said instructions cause computer, 73, to cause matrix switch, 75, to switch the input from recorder, 76, to no output; to cause recorder, 76, to position the start of unit Q at its play head; to cause decoder, 77, to commence detecting signals on all video lines from the beginning of the normal transmission pattern to the end of the last detectable line of the full video frame; then to cause recorder, 76, to commence playing which causes recorder, 76, to transmit and decoder, 77, to detect a particular SPAM message. (Hereinafter, said message is called the "generate-set-information message (#9)".) Said message is addressed to ITS computers, 73, and contains a particular execution segment, appropriate meter-monitor information, padding bits as required, an information segment whose information is the intermediate generation set of Q, and an end of file signal. (Hereinafter, the intermediate generation set that causes any given intermediate transmission station to generate a program instruction set of an instance of the transmission of the programming of program unit Q is called the "intermediate generation set of Q".)

Detecting said message causes decoder, 77, to transmit said message to computer, 73, and receiving said message at computer, 73, causes particular SPAM decoder apparatus of computer, 73, (which apparatus is analogous to SPAM- controller, 205C, at microcomputer, 205, above and is not distinguished from computer, 73, hereinafter) to execute particular controlled functions. In the fashion of the first message of the "Wall Street Week" example at microcomputer, 205, computer, 73, is caused to load information of said intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes computer, 73, to execute particular additional instructions of said controlled functions. Executing said instructions, causes computer, 73, to cause recorder, 76, to cease playing and position the start of the unit Q conventional television programming at the play head of recorder, 76; to |

		cause decoder, 77, to commence detecting information in the normal transmission location alone; to cause stripper, 81, and generator, 82, to prepare to commence stripping and embedding information, respectively, in the normal transmission location; and to execute the information of said intermediate generation set as a compiled, machine language job.

| 19. The method of claim 3, wherein at least one of said plurality of intermediate transmission stations generates control signals and | Page 385, line 9 - Page 386, line 14 | Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program-instruction-set message (#10)", and all of said second messages are the "program-instruction-set messages (#10).") Automatically, each of said computers, 73, selects the information of said meter-monitor segment, adds particular information that identifies its station and the time of transmission, modifies the meter-monitor format field information to reflect said added information, and retains the received, added, and modified meter-monitor information. Then, automatically, each of said computers, 73, selects and transmits to the generator, 82, of its station, information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; its retained meter-monitor information; any required padding bits; complete information of the program instruction set that is at its program-set-to transmit RAM memory; and information of a SPAM end of file signal. Said selected and transmitted information that each of said computers, 73, transmits is complete information of the particular program-instruction-set message (#10) of said computer, 73. (Receiving said message causes the apparatus of the intermediate station of Fig. 6 to transmit the program instruction set of Q.1 in the program-instruction-set message (#10) of said station and causes the apparatus of said second intermediate station to transmit the program instruction set of Q.2 in the program-instruction-set message (#10) of said second station.) Receiving the information of the particular program-instruction-set message (#10) of the computer, 73, of its station causes a generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular program-instruction-set message (#10) of said station to said system, 93. |
| wherein at least one receiver station outputs a video presentation | Page 491, lines 10 -16 | Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing. |

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in accordance with said control signals.	Page 484, lines 12 -18	At the station of Figs. 7 and 7F, receiving the program-instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
	Page 485, lines 14-16	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay
	Page 486, lines 20-27	Automatically, microcomputer, 205, clears video RAM; causes the background color of video RAM to be a color such as black that is transparent when combined with transmitted video by the PC-MicroKey System; causes binary image information of "$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM information is transmitted to said screen.

20. The method of claim 16, wherein a second information transmission transmitted from each of said plurality of intermediate transmission stations includes said programming, said method further comprising the step of including said respective generated signal in said information transmission at each of said plurality of intermediate transmission stations.	Page 469, line 35 - page 470, line 8	The program originating studio of a particular network transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." Said transmission is received at the intermediate transmission station of Fig. 6 and retransmitted immediately on the cable channel of modulator, 83. (Said transmission is also received at the aforementioned second intermediate transmission station of example #10 and retransmitted immediately.)
	Page 478, lines 23 - 26	Then said studio ceases transmitting "Exotic Meals of India" programming for a so-called "commercial break" and commences transmitting the conventional television video and audio information of program unit Q.
	Page 484, lines 1 - 6	Then said studio transmits said transmit-and-execute-program-instruction-set message (#10), causing each intermediate transmission station, including the station of Fig. 6 and said second intermediate transmission station, to transmit its specific program-instruction-set message (#10), as described above.
	Page 385, line 3 - page 386, line 14	Then said program originating studio embeds in the normal transmission location of said transmission and transmits a SPAM message that is addressed to ITS computers, 73, and that contains execution and meter-monitor segments. (Said message is called, hereinafter, the "transmit-

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		and- execute-program-instruction-set message (#10)".) Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program-instruction-set message (#10)", and all of said second messages are the "program-instruction-set messages (#10).") Automatically, each of said computers, 73, selects the information of said meter-monitor segment, adds particular information that identifies its station and the time of transmission, modifies the meter-monitor format field information to reflect said added information, and retains the received, added, and modified meter-monitor information. Then, automatically, each of said computers, 73, selects and transmits to the generator, 82, of its station, information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; its retained meter-monitor information; any required padding bits; complete information of the program instruction set that is at its program-set-to transmit RAM memory; and information of a SPAM end of file signal. Said selected and transmitted information that each of said computers, 73, transmits is complete information of the particular program-instruction-set message (#10) of said computer, 73. (Receiving said message causes the apparatus of the intermediate station of Fig. 6 to transmit the program instruction set of Q.1 in the program-instruction-set message (#10) of said station and causes the apparatus of said second intermediate station to transmit the program instruction set of Q.2 in the program-instruction-set message (#10) of said second station.) Receiving the information of the particular program-instruction-set message (#10) of the computer, 73, of its station causes a generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular program-instruction-set message (#10) of said station to said system, 93.
21. The method of claim 20, wherein said step of including comprises embedding at least a portion of said respective generated signal in the normal transmission location of said programming.	See the support for claim 20, especially page 386, lines 7 – 14.	Receiving the information of the particular program-instruction-set message (#10) of the computer, 73, of its station causes a generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular program-instruction-set message (#10) of said station to said system, 93.
22. The method of	Page 478, lines 23 - 26	Then said studio ceases transmitting "Exotic Meals

claim 21, wherein said programming comprises audio.		of India" programming for a so-called "commercial break" and commences transmitting the conventional television video and audio information of program unit Q.

23. The method of claim 9, further comprising the step of at least one of compiling and linking said microprocessor instructions.	See the support for claim 9, especially page 378, lines 17 – 22 and	... to compile said specific formula-and-item-of-this-transmission information into one or more specific machine language program modules; and to link said specific module or modules to other program modules to become complete program instruction set information of this instance of the network transmission of Q; ...
	Page 380, lines 16 – 22.	... to compile, link, and record information at a particular peripheral memory unit of said computer, 73, in a file named "PROGRAM.EXE" that is the specific program instruction set of said second intermediate station. [Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", ...

24. The method of claim 3, wherein at least one of said plurality of intermediate transmission stations generates control signals,	Page 385, line 9 - Page 386, line 14	Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program- instruction-set message (#10)", and all of said second messages are the "program-instruction-set messages (#10).") Automatically, each of said computers, 73, selects the information of said meter-monitor segment, adds particular information that identifies its station and the time of transmission, modifies the meter-monitor format field information to reflect said added information, and retains the received, added, and modified meter-monitor information. Then, automatically, each of said computers, 73, selects and transmits to the generator, 82, of its station, information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; its retained meter-monitor information; any required padding bits; complete information of the program instruction set that is at its program-set-to transmit RAM memory; and information of a SPAM end of file signal. Said selected and transmitted information that each of said computers, 73, transmits is complete information of the particular program- instruction-set message (#10) of said computer, 73. (Receiving said message causes the apparatus of the intermediate station of Fig. 6 to transmit the program instruction set of Q.1 in the program-instruction-set message (#10) of said station and causes the apparatus of said second intermediate station to transmit the program instruction set of Q.2 in the program-instruction-set message (#10) of said second station.) Receiving the information of the particular program-instruction-set message (#10) of the computer, 73, of its station causes a generator, 82, to embed said information in the normal transmission location of the programming of Q

		transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular program-instruction-set message (#10) of said station to said system, 93.
wherein at least one receiver station outputs a first portion of audio	Page 492, lines 23-30	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
in accordance with said control signals,	Page 484, lines 12-18	At the station of Figs. 7 and 7F, receiving the program-instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
	Page 485, lines 14-18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion.
	Page 488, lines 21-27	microcomputer, 205, computes information of .4609 (rounded), which is the decimal equivalent of the percentage saving; determines that said information is greater than .4600 and less than .4700; and selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
said method further comprising the step of transmitting a second portion of audio	Page 478, lines 23-26	Then said studio ceases transmitting "Exotic Meals of India" programming for a so-called "commercial break" and commences transmitting the conventional television video and audio information of program unit Q.
	Page 470, lines 3-6	Said transmission is received at the intermediate transmission station of Fig. 6 and retransmitted immediately on the cable channel of modulator, 83.
to be output with said first portion of audio.	Page 491, line 30 - Page 493, line 21	Said studio then transmits audio information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over." Then said program originating studio embeds and transmits said 2nd commence-outputting message (#10). Said message consists of a "00" header; particular audio-overlay execution segment information that is addressed to URS microcomputers, 205, appropriate meter-monitor information including "program unit identification code" information and overlay number field information, and any required padding bits. And each intermediate transmission station (including the intermediate station of Fig. 6 and said second intermediate

<table>
<tr><td></td><td></td><td>station) receives and retransmits said message.

Receiving said 2nd commence-outputting message (#10) causes each subscriber station that has completed the generation of first audio image information at audio RAM to combine its specific image information to the conventional audio information transmitted by said studio and to emit sound of its combined specific audio information and its received conventional audio information at its specific monitor, 202M. At the station of Fig. 7 and 7F, decoder, 203, detects the information of said message, and receiving said 2nd commence-outputting message (#10) causes decoder, 203, to execute "SOUND ON" at the microcomputer, 205 of said station. Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying:

"forty-six".

(Simultaneously, the microcomputer, 205, at the station of said second subscriber transmits to the monitor, 202M, of said station, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing emission of sound of said audio information, and said second subscriber can hear said announcer's voice saying:

"forty-five".

And the microcomputer, 205, at the station of said third subscriber transmits to the monitor, 202M, of said station, one instance of the information at the audio RAM of said microcomputer, 205, causing emission of sound of said audio information, and the sound of said announcer's voice saying:

"forty-three"

Then after an interval that is long enough for each subscriber station to emit sound of its specific audio RAM information, said studio transmits audio information of the announcer saying:

"percent."</td></tr>
</table>

25. The method of claim 2, further comprising the step of transmitting	Page 385, lines 9 - 16	... causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program- instruction-set message (#10)", ...
a portion of said first downloadable code in said second downloadable code.	Page 357, lines 21 - 23	Any given intermediate generation set contains generally applicable information of the particular program instruction set whose generation it causes.
	For example, page 379, lines 5 - 16	At the station of Fig. 6, for example, executing the information of said intermediate generation set causes the computer, 73, in precisely the fashion that applied in example

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		#9, to compute the value of a particular variable b to be 62.21875; to computes the value of a particular variable c to be 2.117; and to replaces particular variable values, a, b, and c, in a particular so-called "higher language line of program code" to become formula-and-item-of- this-transmission information of: $$Y = 1000.00 + 62.21875 + (2.117 * X)$$
	For example, page 363, line 34 - page 364, line 23	Executing the information of said intermediate generation set causes computer, 73, to generate said program instruction set in the following fashion. Automatically, computer, 73, selects information of each of the aforementioned variables, a, p, q, d, Z, r, s, and dd; computes the value of variable b, under control of intermediate generation set instructions of equation (2), to be 62.21875; computes the value of variable c, under control of intermediate generation set instructions of equation (3), to be 2.117; and replaces particular variable values, a, b, and c, in a particular so-called "higher language line of program code" that is *among the aforementioned generally applicable information of said program instruction set and is:* $$Y = a + b + (c * X)$$ [which is equation (1) in the language of the IBM BASIC of the IBM Personal Computer Hardware Reference Library] with said selected information of a and the so computed information of b and c to become formula-and-item-of-this-transmission information of: $$Y = 1000.00 + 62.21875 + (2.117 * X)$$
	For example, page 486, lines 9 - 15	Then automatically, on a machine language basis and in a fashion well known in the art, said microcomputer, 205, substitutes the value 4.3 for the variable X in the equation: $$Y = 1000.00 + 62.21875 + (2.117 * X)$$

26. The method of claim 2, wherein said receiver station generates a portion of said information to	Page 485, line 14 - page 486, line 19	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion. Automatically, in a fashion well known in the art, microcomputer, 205, accesses its file A:DATA_OF.URS and locates the aforementioned information of the particular address of the subscriber station of Figs. 7 and 7F the accesses its file D:DATA_OF.ITS and locates the aforementioned information of the particular street addresses of each of the markets of said supermarket chain that is in the locality of the intermediate station of Fig. 6. Then automatically, microcomputer, 205, accesses the aforementioned distance-and-relative-location module that, when accessed, computes the shortest vehicle driving distance between any two locations in the local vicinity of the station of Fig. 6 when passed two street addresses of said vicinity and passes to said module and passes to said module the address of said subscriber station and, one at a time, the address of each of said markets. Automatically, under control of the instructions of said module, microcomputer, 205, computes the shortest vehicle distance and the relative direction

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		between said subscriber station and each of said markets. Then automatically, by comparing distance information, microcomputer, determines which market is closest to said subscriber station, that the distance between said subscriber station and said market is 4.3 miles, and that said subscriber station is southwest of said market. Automatically, microcomputer, 205, stores particular southwest-quadrant information at particular 1st working memory of said microcomputer, 205. Then automatically, on a machine language basis and in a fashion well known in the art, said microcomputer, 205, substitutes the value 4.3 for the variable X in the equation: $$Y = 1000.00 + 62.21875 + (2.117 * X)$$ computes the value of Y that is specific the the station of Figs. 7 and 7F to be: 1071.32 (rounded in a fashion well known in the art); and stores 1071.32 information at particular 2nd working memory of said microcomputer, 205.
one of complete	Page 486, lines 20 - 27	Automatically, microcomputer, 205, clears video RAM; causes the background color of video RAM to be a color such as black that is transparent when combined with transmitted video by the PC-MicroKey System; causes binary image information of "$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM information is transmitted to said screen.
	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
and supplement	Page 496, lines 3 – 13 *et seq.*	Automatically, microcomputer, 205, selects information of the aforementioned 1071.32 at said 2nd working memory and transmits said information to printer, 221, causing printer, 221, to print: "1,071.32". Automatically, microcomputer, 205, transmits additional print information of said program instruction set of Q.1 including information of "15 cents off" and of "Nabisco Zweiback Teething Toast" (incorporated into said generally applicable information at the station of Fig. 6). At printer, 221, the printed so-called "hard copy" of said offer and coupon information emerges as:
said programming by processing stored data, said method further comprising the step of	Page 485, lines 14 - 33	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion. Automatically, in a fashion well known in the art, microcomputer, 205, accesses its file A:DATA_OF.URS and locates the aforementioned information of the particular address of the subscriber station of Figs. 7 and 7F the accesses its file D:DATA_OF.ITS and locates the aforementioned information of the particular street addresses of each of the markets of said supermarket chain that is in the locality of the intermediate station of Fig. 6. Then automatically, microcomputer, 205, accesses the

		aforementioned distance-and-relative-location module that, when accessed, computes the shortest vehicle driving distance between any two locations in the local vicinity of the station of Fig. 6 when passed two street addresses of said vicinity and passes to said module and passes to said module the address of said subscriber station and, one at a time, the address of each of said markets.
transmitting data to be stored at said receiver station.	Page 383, lines 26 - 31	... causes each of said computers, 73, ... to generate a particular first outbound SPAM message that includes information of the data file, DATA_OF.ITS, at its data-set-to-transmit RAM memory; and to cause said message to be transmitted to its field distribution system, 93.
	Page 483, lines 2 - 13	At the station of Figs. 7 and 7F, receiving the data-module-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which includes complete information of the aforementioned data file, DATA_OF.ITS, of said station). Executing said information causes microcomputer, 205, to place said complete information at a so-called "D:" RAM disk at the RAM of said microcomputer, 205, in a file entitled, at the directory of said disk, "DATA_OF.ITS".

28. The method of claim 2, further comprising the step of transmitting said programming to said receiver station.	Page 374, line 32 - page 375, line 6	In example #10, a particular program originating studio transmits the commercial of program unit Q in a network transmission and controls a plurality of intermediate transmission stations each of which controls, in turn, a plurality of subscriber stations that are ultimate receiver stations. The station of Fig. 6 is one intermediate transmission station controlled by said studio. The station of Fig. 6 receives said network transmission at receiver, 53, and retransmits said transmission immediately via modulator, 83.
	Page 469, line 35 - page 470, line 13	The program originating studio of a particular network transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." Said transmission is received at the intermediate transmission station of Fig. 6 and retransmitted immediately on the cable channel of modulator, 83. (Said transmission is also received at the aforementioned second intermediate transmission station of example #10 and retransmitted immediately.) At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is retransmitted by the intermediate station of Fig. 6; ...
	Page 478, lines 23 - 26	Then said studio ceases transmitting "Exotic Meals of India" programming for a so-called "commercial break" and commences transmitting the conventional television video and audio information of program unit Q.

29. The method of claim 4, wherein a plurality of instruction sets are generated at said plurality of intermediate transmission stations	Page 378, lines 23 - 28	(Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of Q.1", signifying that said set is one version of complete program instruction set information of said instance of the network transmission of Q.)
	Page 376, lines 22 - 23	(At a particular second intermediate transmission station, ...
	Page 380, lines 19 - 24	[Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", signifying that said set is a second version of complete program instruction set information of said instance of the network transmission of Q.]
in accordance with said at least one generation instruction,	Page 377, lines 7 - 9	... the computers, 73, of said controlled intermediate transmission stations ...
	Page 377, line 26 - page 378, line 23	Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter-monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set- information message (#10)".) Except for its meter-monitor information, said generate-set-information message (#10) is identical to the aforementioned generate-set-information message (#9). Transmitting said generate-set-information message (#10) causes said dedicated decoders to detect and input said message to the computers, 73, of said stations. Receiving said message at said computers, 73, causes each of said computers, 73, to load information of said intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes each of said computers, 73, to execute the information so loaded as a machine language job; to compute the specific formula-and-item-of-this-transmission-information of said computer, 73, in the predetermined fashion of said intermediate generation set according to the prerecorded data of the local-formula-and-item information of said computer, 73; to compile said specific formula-and-item-of-this-transmission information into one or more specific machine language program modules; and to link said specific module or modules to other program modules to become complete program instruction set information of this instance of the network transmission of Q; and to record said information at particular memory.
wherein each of said plurality of intermediate	Page 385, line 35 - page 386, line 6	(Receiving said message causes the apparatus of the intermediate station of Fig. 6 to transmit the program

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transmission stations transmits at least one of said plurality of instruction sets		instruction set of Q.1 in the program-instruction-set message (#10) of said station and causes the apparatus of said second intermediate station to transmit the program instruction set of Q.2 in the program-instruction-set message (#10) of said second station.)
to at least one receiver station,	Page 484, lines 7 - 14	Receiving the specific program-instruction-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the PROGRAM.EXE information in said message at particular RAM and execute the information so loaded as a machine language job. At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes ...
	Page 470, line 31 - page 471, line 2	And apparatus of the station of said third subscriber [which station is a subscriber station of said second intermediate station] also receives, interconnects, meters and monitors, and displays at a monitor, 202M, the information of the transmission of said program that is transmitted by said second intermediate station.)
	Page 487, lines 8 - 11	And under control of the instructions of said program instruction set of Q.2, the microcomputer, 205, at the station of said third subscriber computes ...
and wherein each said at least one receiver station generates output information content by processing data in accordance with at least one of said plurality of instruction sets, said method further comprising the step of	Page 485, lines 10 - 13	Executing the specific program instruction set instructions received at each subscriber station causes the microcomputer, 205, of said station to generate its own specific information of a series of outputs.
	Page 487, lines 29 - 35	Then, under control of said instructions that constitute the specific program instruction set of the microcomputer, 205, of the station of Figs. 7 and 7F, said microcomputer, 205, generates and stores additional information of subsequent outputs, selects sound image information of a first audio overlay, and places said selected information at audio RAM.
	Page 488, lines 21 - 27	... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM. (In similar fashion, the
	Page 489, lines 13 - 32	And the microcomputer, 205, at the station of said third subscriber ... selects the audio information of an announcer's voice saying "forty-three" from its file, D:DATA_OF.ITS; and places said information at said audio RAM.)
	Page 492, line 19 - page 493, line 15	At the station of Fig. 7 and 7F, ... Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the

		information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six". (Simultaneously, ... And the microcomputer, 205, at the station of said third subscriber transmits to the monitor, 202M, of said station, one instance of the information at the audio RAM of said microcomputer, 205, causing emission of sound of said audio information, and the sound of said announcer's voice saying: "forty-three" is what said third subscriber can hear.)
transmitting said data.	Page 383, lines 26 - 34	... causes each of said computers, 73, to cause stripping and embedding to commence; to generate a particular first outbound SPAM message that includes information of the data file, DATA_OF.ITS, at its data-set- to-transmit RAM memory; and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the first outbound SPAM message of any given one of said computers, 73, is called a "data-module-set message (#10)" ...
	Page 482, line 32 - page 483, line 2	Receiving the specific data-module-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the DATA_OF.ITS information in said message in a particular file, named "DATA_OF.ITS" at so-called "RAM disk" memory of the microcomputer, 205, of said station.

31. The method of claim 4, wherein a plurality of instructions are generated at said plurality of intermediate transmission stations	Page 378, lines 23 - 28	(Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of Q.1", signifying that said set is one version of complete program instruction set information of said instance of the network transmission of Q.)
	Page 376, lines 22 - 23	(At a particular second intermediate transmission station, ...
	Page 380, lines 19 - 24	[Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", signifying that said set is a second version of complete program instruction set information of said instance of the network transmission of Q.]
in accordance with said at least one generation instruction,	Page 377, lines 7 - 9	... the computers, 73, of said controlled intermediate transmission stations ...
	Page 377, line 26 - page 378, line 23	Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter- monitor information, padding bits as required, information segment information of the

		aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set- information message (#10)".) Except for its meter-monitor information, said generate-set-information message (#10) is identical to the aforementioned generate-set-information message (#9). Transmitting said generate-set-information message (#10) causes said dedicated decoders to detect and input said message to the computers, 73, of said stations. Receiving said message at said computers, 73, causes each of said computers, 73, to load information of said intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes each of said computers, 73, to execute the information so loaded as a machine language job; to compute the specific formula-and-item-of-this-transmission-information of said computer, 73, in the predetermined fashion of said intermediate generation set according to the prerecorded data of the local-formula-and-item information of said computer, 73; to compile said specific formula-and-item-of-this- transmission information into one or more specific machine language program modules; and to link said specific module or modules to other program modules to become complete program instruction set information of this instance of the network transmission of Q; and to record said information at particular memory.
wherein each of said plurality of intermediate transmission stations transmits a portion of said processor instructions	Page 385, line 35 - page 386, line 6	(Receiving said message causes the apparatus of the intermediate station of Fig. 6 to transmit the program instruction set of Q.1 in the program-instruction-set message (#10) of said station and causes the apparatus of said second intermediate station to transmit the program instruction set of Q.2 in the program-instruction-set message (#10) of said second station.)
to at least one ultimate receiver station,	Page 484, lines 7 - 14	Receiving the specific program-instruction-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the PROGRAM.EXE information in said message at particular RAM and execute the information so loaded as a machine language job. At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes ...
	Page 470, line 31 - page 471, line 2	And apparatus of the station of said third subscriber [which station is a subscriber station of said second intermediate station] also receives, interconnects, meters and monitors, and displays at a monitor, 202M, the information of the transmission of said program that is transmitted by said second intermediate station.)
	Page 487, lines 8 - 11	And under control of the instructions of said program instruction set of Q.2, the microcomputer, 205, at the station of said third subscriber computes ...

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	Page 40, line 31 - page 41, line 2. See also the remaining support for this claim.	(Hereinafter, ... stations where subscribers view programming are called "ultimate receiver stations.")
and wherein each said at least one ultimate receiver station outputs a television programming presentation in accordance with a portion of said processor instructions, said method further comprising the step of	Page 485, lines 10 - 16	Executing the specific program instruction set instructions received at each subscriber station causes the microcomputer, 205, of said station to generate its own specific information of a series of outputs. Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay ...
	Page 486, lines 20 - 27	Automatically, microcomputer, 205, clears video RAM; causes the background color of video RAM to be a color such as black that is transparent when combined with transmitted video by the PC-MicroKey System; causes binary image information of "$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM information is transmitted to said screen.
	Page 486, line 27 - page 487, line 28	(Simultaneously, ... And under control of the instructions of said program instruction set of Q.2, the microcomputer, 205, at the station of said third subscriber ... clears and sets video RAM to said transparent background color; and causes binary image information of "$1,138.92" to be placed at particular upper left hand video screen bit locations of video RAM.)
	Page 491, lines 10 - 29	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing. (Simultaneously ... And at the station of said third subscriber, in the same fashion, apparatus causes the specific video RAM image information of said station, which is "$1,138.92", to be displayed at the upper left hand corner of the picture screen of the monitor, 202M, of said station and said third subscriber can see the image said person pointing at $1,138.92.)
transmitting television programming to be outputted as a part of said television programming presentation at each said at least one ultimate receiver station.	Page 490, lines 11 - 23	Said studio transmits television picture information of the upper torso of a person and audio information of an announcer saying, "For a limited time only, Super Discount Supermarkets make this special offer to you. Super Discount Supermarkets will deliver to you, at cost, all the pork you need to entertain five hundred people for this low, low price ... " Said studio transmits television picture information of the right hand and arm of said person pointing moving to point at the upper left hand corner of the television screen.

	Page 491, lines 10 - 29	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing. (Simultaneously ... And at the station of said third subscriber, in the same fashion, apparatus causes the specific video RAM image information of said station, which is "$1,138.92", to be displayed at the upper left hand corner of the picture screen of the monitor, 202M, of said station and said third subscriber can see the image said person pointing at $1,138.92.)

32. The method of claim 5, wherein at least one of said plurality of intermediate transmission stations generates a plurality of instructions in accordance with said at least one generation instruction,	Page 545, lines 3 - 11	Receiving the specific SPAM message of its national intermediate station causes the computer, 73, of each local intermediate station to execute the contained local level intermediate generation set of said message and to generate information of a specific program instruction set in the fashion that executing the intermediate generation set of Q caused different intermediate stations in example #10 to generate their specific program instruction sets of Q.1 or Q.2.
	Page 24, lines 14 - 16	(Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
and wherein at least one ultimate receiver station generates output information content by processing data in accordance with said plurality of instructions.	Page 547, lines 19 - 26	In the fashion of example #9, each local intermediate station detects the particular SPAM message of its recorder, 76, at its decoder, 77, and receiving its particular message causes each station to embed and transmit end of file signal information then a particular first SPAM message that is addressed to URS microcomputers, 205, and that contains complete information of its particular program instruction set.
	Page 547, line 35 - page 548, line 6	Receiving the particular first SPAM message of its local intermediate station causes apparatus of the subscriber station of each farmer to execute the contained program instruction set of said message at the microcomputer, 205, of said station and to commence generating the specific combined medium output information of its subscriber station.
	Page 533, line 35 - page 534, line 5	Each farmer has a subscriber station that is identical to the station of Fig. 7 except that each station has two television recorder/players that are recorder/players, 217 and 217A; two television tuners, 215 and 215A; and a laser disk player, 232.
	Page 390, lines 30 - 31	Fig. 7 exemplifies one embodiment of an ultimate receiver station; ...
	Page 548, lines 18 - 27	So executing a specific contained program instruction set causes each microcomputer, 205, to generate a specific so-called "optimal" solution for its

		particular farmer's problem of deciding what mix of crops is most profitable to grow on his property, given his resources. First, each microcomputer, 205, accesses the specific information of its particular farmer. Automatically, under control of its specific received program instruction set, each microcomputer, 205, accesses the file, MY_FARM.DAT, that is prerecorded on the disk loaded at its A: disk drive ...
	Page 549, line 32 - page 550, line 10	Then using linear programming techniques that are well known in the art, each farmer's microcomputer, 205, under control of the particular program instruction set generated and transmitted by its local intermediate station, computes its particular farmer's "optimal" crop planting plan by making reference to said farmer's specific data that includes, for example, the number and size of the individual parcels of property of the farmer's farm, the soil conditions of said parcels, the aspects of said parcels with respect to sunlight and shade, the history of crop rotation of said parcels, the farm equipment of said farmer, and the financial resources of said farmer; by using said data as so-called "constraints"; and by applying information of said program instruction set.
	Page 552, lines 20 - 26	Automatically, in the fashion of example #10, the display and output apparatus of each farmer's station commences displaying and outputting generally applicable television picture image, sound, and print information of a crop planting plan combined periodically with related locally generated specific crop planting plan information of its specific farmer.

34. The method of claim 5, wherein at least one of said plurality of intermediate transmission stations generates a plurality of instructions in accordance with said at least one generation instruction,	Page 545, lines 3 - 11	Receiving the specific SPAM message of its national intermediate station causes the computer, 73, of each local intermediate station to execute the contained local level intermediate generation set of said message and to generate information of a specific program instruction set in the fashion that executing the intermediate generation set of Q caused different intermediate stations in example #10 to generate their specific program instruction sets of Q.1 or Q.2.
	Page 24, lines 14 - 16	(Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
and wherein at least one ultimate receiver station outputs a video presentation in accordance with said plurality of instructions, said method further comprising the step of	Page 547, lines 19 - 26	In the fashion of example #9, each local intermediate station detects the particular SPAM message of its recorder, 76, at its decoder, 77, and receiving its particular message causes each station to embed and transmit end of file signal information then a particular first SPAM message that is addressed to URS microcomputers, 205, and that contains complete information of its particular program instruction set.
	Page 547, line 35 - page	Receiving the particular first SPAM message of

	548, line 6	its local intermediate station causes apparatus of the subscriber station of each farmer to execute the contained program instruction set of said message at the microcomputer, 205, of said station and to commence generating the specific combined medium output information of its subscriber station.
	Page 533, line 35 - page 534, line 5	Each farmer has a subscriber station that is identical to the station of Fig. 7 except that each station has two television recorder/players that are recorder/players, 217 and 217A; two television tuners, 215 and 215A; and a laser disk player, 232.
	Page 390, lines 30 - 31	Fig. 7 exemplifies one embodiment of an ultimate receiver station; ...
	Page 552, lines 20 - 30	Automatically, in the fashion of example #10, the display and output apparatus of each farmer's station commences displaying and outputting generally applicable television picture image, sound, and print information of a crop planting plan combined periodically with related locally generated specific crop planting plan information of its specific farmer. Automatically, crop and budget information of the aforementioned optimal crop planting plan of each farmer is explained in the outputted the generally applicable programming and is displayed, emitted in sound, and printed at the station of each farmer.
	Page 485, lines 14 - 16 Example #10 extends from page 374 to page 390 and from page 469 to page 516.	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay ...
	Page 486, lines 20 - 27	Automatically, microcomputer, 205, clears video RAM; causes the background color of video RAM to be a color such as black that is transparent when combined with transmitted video by the PC-MicroKey System; causes binary image information of "$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM information is transmitted to said screen.
	Page 491, lines 10 - 17	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
transmitting video	Page 546, line 11 - page 547, line 14	intermediate station. In so doing, each local intermediate station commences transmitting television information of a national and local segment of the "Farm Plans of Europe" program. (Each national intermediate station can have transmitted said prerecorded programming to its local intermediate stations and caused said stations to

		organize said programming in the fashion of examples #8 and #9 or, alternatively, said first-national-cueing message (#11) could cause each local station to commence transmitting on its master channel transmission the its received television transmission of the second television channel output transmission of its specific national intermediate transmission station.)
		
		    Automatically each ultimate receiver station that is not equipped with a satellite earth station (and which is, as a consequence, receiving the master transmission of said European master station retransmitted on the master channel transmission of its local intermediate transmission station) commences receiving the programming transmitted by the recorder, 76, of its local intermediate station.
		
		    At 4:29:55 PM, GMT, said European master network station embeds in its master transmission and transmits a particular SPAM second-master-cueing message (#11) that is addressed to URS microcomputers, 205.
		
		    Only ultimate receiver stations that are equipped with and that receive the information of said master transmission directly by means of satellite earth station apparatus receive said second-master-cueing message (#11), and receiving said message causes said stations each to receive and process the combined medium programming of the television channel transmission that is the master channel transmission of its particular local intermediate transmission station (of which transmission information is preprogrammed at its EPROM, 20B). Automatically, a tuner, 215, is tuned at each of said stations to receive the particular master channel transmission of the EPROM, 20B, of said station and apparatus of said station interconnects to input the received master channel transmission to the microcomputer, 205, and the decoder, 203, of said station.

	For example, page 490, lines 11 - 23	Said studio transmits television picture information of the upper torso of a person and audio information of an announcer saying, "For a limited time only, Super Discount Supermarkets make this special offer to you. Super Discount Supermarkets will deliver to you, at cost, all the pork you need to entertain five hundred people for this low, low price ... " Said studio transmits television picture information of the right hand and arm of said person pointing moving to point at the upper left hand corner of the television screen.
to be output with said video presentation.	Page 552, lines 14 - 30	Receiving the further additional SPAM messages of its local intermediate station causes apparatus at each subscriber station of a farmer to display or otherwise output (or to cease displaying or otherwise outputting) further combined medium programming of said national and local segment of the "Farm Plans of Europe" program. Automatically, in the fashion of example #10, the display and output apparatus of each

		farmer's station commences displaying and outputting generally applicable television picture image, sound, and print information of a crop planting plan combined periodically with related locally generated specific crop planting plan information of its specific farmer. Automatically, crop and budget information of the aforementioned optimal crop planting plan of each farmer is explained in the outputted the generally applicable programming and is displayed, emitted in sound, and printed at the station of each farmer.
	For example, page 491, lines 10 - 17	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.

36. The method of claim 6, wherein at least one ultimate receiver station outputs a first portion of audio	Page 492, lines 23-30	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
in accordance with said signal,	Page 484, lines 12-18	At the station of Figs. 7 and 7F, receiving the program-instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
	Page 485, lines 14-18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion.
	Page 488, lines 21-27	microcomputer, 205, computes information of .4609 (rounded), which is the decimal equivalent of the percentage saving; determines that said information is greater than .4600 and less than .4700; and selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
said method further comprising the step of transmitting a second portion of audio	Page 478, lines 23-26	Then said studio ceases transmitting "Exotic Meals of India" programming for a so-called "commercial break" and commences transmitting the conventional television video and audio information of program unit Q.

	Page 470, lines 3-6	Said transmission is received at the intermediate transmission station of Fig. 6 and retransmitted immediately on the cable channel of modulator, 83.
to be output with said first portion of audio.	Page 491, line 30 - Page 493, line 21	Said studio then transmits audio information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over." Then said program originating studio embeds and transmits said 2nd commence-outputting message (#10). Said message consists of a "00" header; particular audio-overlay execution segment information that is addressed to URS microcomputers, 205, appropriate meter-monitor information including "program unit identification code" information and overlay number field information, and any required padding bits. And each intermediate transmission station (including the intermediate station of Fig. 6 and said second intermediate station) receives and retransmits said message. Receiving said 2nd commence-outputting message (#10) causes each subscriber station that has completed the generation of first audio image information at audio RAM to combine its specific image information to the conventional audio information transmitted by said studio and to emit sound of its combined specific audio information and its received conventional audio information at its specific monitor, 202M. At the station of Fig. 7 and 7F, decoder, 203, detects the information of said message, and receiving said 2nd commence-outputting message (#10) causes decoder, 203, to execute "SOUND ON" at the microcomputer, 205 of said station. Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six". (Simultaneously, the microcomputer, 205, at the station of said second subscriber transmits to the monitor, 202M, of said station, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing emission of sound of said audio information, and said second subscriber can hear said announcer's voice saying: "forty-five". And the microcomputer, 205, at the station of said third subscriber transmits to the monitor, 202M, of said station, one instance of the information at the audio RAM of said microcomputer, 205, causing emission of sound of said audio information, and the sound of said announcer's voice saying: "forty-three" Then after an interval that is long enough for each subscriber station to emit sound of its specific audio RAM information, said studio transmits audio

		information of the announcer saying: "percent."

37. The method of claim 7, further comprising the step of transmitting data to be stored at said plurality of intermediate transmission stations.	Page 375, lines 13 - 34	Prior to a particular early time, complete local-formula-and-item information is inputted to and caused to be recorded at the computer, 73, of each controlled intermediate transmission station in such a way that each computer, 73, contains complete information relevant to the particular discounts and specials in effect at the particular markets in the vicinity of said station and at the particular time of the network transmission of Q. Thus each computer, 73, contains the specific values of a, p, q, d, Z, r, s, and dd of its specific station; the specific street address of every one of said supermarket chain's markets in the locality of said station; and other specific data of said station such as, for example, "Nabisco Zweiback Teething Toast". Local-formula-and-item information can be inputted to said computers, 73, in any fashion that said computers, 73, can receive information. However, in the preferred embodiment, information that applies at all network stations at the time of any given transmission of a given program unit--for example, the undelivered per unit cost of pork bellies: a--is transmitted to all stations simultaneously in a SPAM message that causes each station to select and record properly said information.
	Page 14, line 35 - page 15, line 2	Examples of signal words are a string of one or more digital data bits encoded together on a single line of video or sequentially in audio.

39. The method of claim 7, wherein at least one of said plurality of intermediate transmission stations transmits a plurality of generation instructions to	Page 385, line 35 - page 386, line 3	(Receiving said message causes the apparatus of the intermediate station of Fig. 6 to transmit the program instruction set of Q.1 in the program-instruction-set message (#10) of said station ...
	Page 24, lines 14 - 16	(Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
	Page 485, lines 14 - 16	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay ...
at least one ultimate receiver station,	Page 484, lines 12 - 17	At the station of Figs. 7 and 7F, receiving the program-instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 ...

	Page 390, lines 30 - 31	Fig. 7 exemplifies one embodiment of an ultimate receiver station; ...
and wherein said at least ultimate receiver station outputs a television programming presentation	Page 491, lines 10 - 17	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
in accordance with said plurality of generation instructions, said method further comprising the step of	Page 485, lines 14 - 16	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay ...
	Page 486, lines 20 - 27	Automatically, microcomputer, 205, clears video RAM; causes the background color of video RAM to be a color such as black that is transparent when combined with transmitted video by the PC-MicroKey System; causes binary image information of "$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM information is transmitted to said screen.
transmitting to said ultimate receiver station television programming to be presented with said television programming presentation.	Page 490, lines 11 - 23	Said studio transmits television picture information of the upper torso of a person and audio information of an announcer saying, "For a limited time only, Super Discount Supermarkets make this special offer to you. Super Discount Supermarkets will deliver to you, at cost, all the pork you need to entertain five hundred people for this low, low price ... " Said studio transmits television picture information of the right hand and arm of said person pointing moving to point at the upper left hand corner of the television screen.
	Page 491, lines 10 - 17	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.

| 40. The method of claim 8, further comprising the steps of: receiving, in said network, a class of data to be processed at said plurality of intermediate transmission stations; and | Page 555, line 25 - page 556, line 6 | ... causes the instructions of said module to cause his signal processor, 200, to transmit the information of his "PLANTING.DAT" file, via telephone network in the fashion of example #10, to a computer at a particular remote data collection station. Over the course of a particular time such as two days, computers at remote data collection stations receive data automatically from each farmer of said nations which data indicates the specific quantity of each crop that each |

		farmer expects to harvest during the 2027 growing season. Automatically, the received data is aggregated, in a fashion well known in the art, at the computer of said European master network origination and control station which allows planners at said station to modify and refine the variables of the national intermediate generation set of said station, especially the projected market prices at which farmers are projected to be able to sell each alternate crop.
distributing said class of data to said plurality of intermediate transmission stations.	Page 556, lines 7 - 11	The aggregated data is also distributed automatically to computers at the national and local intermediate transmission stations, enabling national and local planners to vary and refine the policy variables of their stations' local-formula-and-item information.

41. The method of claim 8, where said communications control signal includes an instruct to embed.	Page 544, lines 23 - 30	After an interval of time that is long enough for each national intermediate generation station to generate its specific local level intermediate generation set, said European master network station embeds and transmits a SPAM message that is addressed to ITS, computers, 73, of intermediate stations that are national stations and that instructs said stations to embed and transmit their specific local intermediate sets.

42. The method of claim 8, wherein said at least one generation control signal enables each of said plurality of intermediate transmission stations to	Page 545, lines 3 - 11	Receiving the specific SPAM message of its national intermediate station causes the computer, 73, of each local intermediate station to execute the contained local level intermediate generation set of said message and to generate information of a specific program instruction set in the fashion that executing the intermediate generation set of Q caused different intermediate stations in example #10 to generate their specific program instruction sets of Q.1 or Q.2.
transmit a plurality of generation instructions to at least one ultimate receiver station,	Page 547, lines 22 - 26	... causes each station to embed and transmit end of file signal information then a particular first SPAM message that is addressed to URS microcomputers, 205, and that contains complete information of its particular program instruction set.
	Page 24, lines 14 - 16	(Hereinafter, such a set of instructions that is loaded and run is called a "program instruction set.")
	Page 547, line 35 - page 548, line 6	Receiving the particular first SPAM message of its local intermediate station causes apparatus of the subscriber station of each farmer to execute the contained program instruction set of said message at the microcomputer, 205, of said station and to commence generating the specific combined medium output information of its subscriber station.
	Page 533, line 35 - page	Each farmer has a subscriber station that is identical to

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	534, line 5	the station of Fig. 7 except that each station has two television recorder/players that are recorder/players, 217 and 217A; two television tuners, 215 and 215A; and a laser disk player, 232.
	Page 390, lines 30 - 31	Fig. 7 exemplifies one embodiment of an ultimate receiver station; ...
and wherein each said at least one ultimate receiver station outputs a television programming presentation	Page 552, lines 20 - 30	Automatically, in the fashion of example #10, the display and output apparatus of each farmer's station commences displaying and outputting generally applicable television picture image, sound, and print information of a crop planting plan combined periodically with related locally generated specific crop planting plan information of its specific farmer. Automatically, crop and budget information of the aforementioned optimal crop planting plan of each farmer is explained in the outputted the generally applicable programming and is displayed, emitted in sound, and printed at the station of each farmer.
	For example, page 491, lines 10 – 17. Example #10 extends from page 374 to page 390 and from page 469 to page 516.	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
in accordance with said plurality of generation instructions, said method further comprising the step of	Page 547, line 35 - page 548, line 6	Receiving the particular first SPAM message of its local intermediate station causes apparatus of the subscriber station of each farmer to execute the contained program instruction set of said message at the microcomputer, 205, of said station and to commence generating the specific combined medium output information of its subscriber station.
	For example, page 485, lines 14 - 16	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay ...
	For example, page 486, lines 20 - 27	Automatically, microcomputer, 205, clears video RAM; causes the background color of video RAM to be a color such as black that is transparent when combined with transmitted video by the PC-MicroKey System; causes binary image information of "$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM information is transmitted to said screen.
transmitting, to each said at least one ultimate receiver station, television programming	Page 546, line 11 - page 547, line 14	In so doing, each local intermediate station commences transmitting television information of a national and local segment of the "Farm Plans of Europe" program. (Each national intermediate station can have transmitted said prerecorded programming to its local intermediate stations and caused said stations to organize said programming in the fashion of examples #8 and #9 or,

		alternatively, said first-national-cueing message (#11) could cause each local station to commence transmitting on its master channel transmission the its received television transmission of the second television channel output transmission of its specific national intermediate transmission station.)
		
		    Automatically each ultimate receiver station that is not equipped with a satellite earth station (and which is, as a consequence, receiving the master transmission of said European master station retransmitted on the master channel transmission of its local intermediate transmission station) commences receiving the programming transmitted by the recorder, 76, of its local intermediate station.
		
		    At 4:29:55 PM, GMT, said European master network station embeds in its master transmission and transmits a particular SPAM second-master-cueing message (#11) that is addressed to URS microcomputers, 205.
		
		    Only ultimate receiver stations that are equipped with and that receive the information of said master transmission directly by means of satellite earth station apparatus receive said second-master-cueing message (#11), and receiving said message causes said stations each to receive and process the combined medium programming of the television channel transmission that is the master channel transmission of its particular local intermediate transmission station (of which transmission information is preprogrammed at its EPROM, 20B). Automatically, a tuner, 215, is tuned at each of said stations to receive the particular master channel transmission of the EPROM, 20B, of said station and apparatus of said station interconnects to input the received master channel transmission to the microcomputer, 205, and the decoder, 203, of said station.

	For example, page 490, lines 11 - 23	Said studio transmits television picture information of the upper torso of a person and audio information of an announcer saying, "For a limited time only, Super Discount Supermarkets make this special offer to you. Super Discount Supermarkets will deliver to you, at cost, all the pork you need to entertain five hundred people for this low, low price ... " Said studio transmits television picture information of the right hand and arm of said person pointing moving to point at the upper left hand corner of the television screen.
to be outputted with said television programming presentation.	Page 552, lines 14 - 30	Receiving the further additional SPAM messages of its local intermediate station causes apparatus at each subscriber station of a farmer to display or otherwise output (or to cease displaying or otherwise outputting) further combined medium programming of said national and local segment of the "Farm Plans of Europe" program. Automatically, in the fashion of example #10, the display and output apparatus of each farmer's station commences displaying and outputting

| | | generally applicable television picture image, sound, and print information of a crop planting plan combined periodically with related locally generated specific crop planting plan information of its specific farmer. Automatically, crop and budget information of the aforementioned optimal crop planting plan of each farmer is explained in the outputted the generally applicable programming and is displayed, emitted in sound, and printed at the station of each farmer. |
| | For example, page 491, lines 10 - 17 | Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing. |

43. A method of communicating	Page 11, lines 5 - 10	The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
and controlling	Page 59, lines 29 - 33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
at least one of the reception and presentation of programming	Page 20, lines 16 - 19	TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.
in a network,	Page 375, lines 4 - 6	The station of Fig. 6 receives said network transmission at receiver, 53, and retransmits said transmission immediately via modulator, 83.
said network including a programming origination station,	Page 374, lines 20 - 28	In the present invention, a remote network origination and control station, such as the aforementioned program originating studio that originates the transmission of the "Wall Street Week" program, can control a plurality of intermediate transmission stations in generating and embedding combined medium control instructions--that is, program instruction sets, data module sets, and combining synch commands--that control generating and transmitting at pluralities of ultimate receiver stations.
	For example, page 478, lines 10 - 12	... said programming origination studio commences the example #10 transmission of the programming ...

an intermediate transmission station,	Page 375, lines 3 - 4	The station of Fig. 6 is one intermediate transmission station controlled by said studio.
and at least one subscriber station,	Page 374, line 34 - page 375, line 2	network transmission and controls a plurality of intermediate transmission stations each of which controls, in turn, a plurality of subscriber stations that are ultimate receiver stations.
said intermediate transmission station including a receiver	Page 375, lines 4 - 5	The station of Fig. 6 receives said network transmission at receiver, 53, ...
	Page 374, lines 32 - 35	In example #10, a particular program originating studio transmits the commercial of program unit Q in a network transmission and controls a plurality of intermediate transmission stations each of which ...
	Page 40, lines 17 - 23	The signals of the present invention are the modalities whereby stations that originate programming transmissions control the handling, generating, and displaying of programming at subscriber stations. (The term, "SPAM," is used, hereinafter, to refer to signal processing apparatus and methods of the present invention.)
	For example, page 382, line 35 - page 383, line 2	... SPAM messages of the SPAM information subsequently embedded in the transmission of the programming of Q.
	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
and a transmitter,	Page 375, lines 4 - 6	The station of Fig. 6 receives said network transmission at receiver, 53, and retransmits said transmission immediately via modulator, 83.
	Page 470, lines 9 - 12	At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission ...
	Page 478, lines 23 - 26	Then said studio ... commences transmitting the conventional television video and audio information of program unit Q.
	Page 481, lines 7 - 9	... SPAM messages of the SPAM information subsequently embedded in the transmission of the programming of Q.
and at least one subscriber station including at least one output device,	Page 491, lines 4 - 6	... its specific monitor, 202M, to display ... transmitted video information.
	Page 491, lines 14 - 16	... the picture screen of monitor, 202M, ... the image of the person shown at said screen is pointing.

	Page 20, lines 16 - 19	TV monitor, 202M, has capacity ... for presenting a conventional television video image and audio sound.
said method comprising the steps of:	Page 484, lines 1 - 6	Then said studio transmits said transmit-and-execute- program-instruction-set message (#10), causing each intermediate transmission station, including the station of Fig. 6 and said second intermediate transmission station, to transmit its specific program-instruction-set message (#10), as described above.
	Page 484, lines 12 - 18	At the station of Figs. 7 and 7F, receiving the program-instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
	Page 485, lines 14 - 18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion.
	Page 486, lines 20 - 27	Automatically, microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM information is transmitted to said screen.
	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
storing computer program code at said intermediate transmission station related to	Page 378, lines 7 - 9	Receiving said message at said computers, 73, causes each of said computers, 73, to load information of said intermediate generation set at particular RAM.
	Page 377, lines 32 - 33	... the aforementioned intermediate generation set of Q, ...
	Page 359, lines 9 - 13	(Hereinafter, the intermediate generation set that causes any given intermediate transmission station to generate a program instruction set of an instance of the transmission of the programming of program unit Q is called the "intermediate generation set of Q".)
	Page 356, lines 13 - 17	(Hereinafter, an instance of computer program instructions that cause a computer, at an intermediate transmission station, to generate information of a program instruction set is called an "intermediate generation set.")

	Page 54, lines 2 - 6	An information segment can transmit any information that a processor can process. It can transmit compiled machine language code or assembly language code or higher level language programs, all of which are well known in the art.
first programming;	Page 374, lines 32 - 33	In example #10, a particular program originating studio transmits the commercial of program unit Q ...
inputting to a computer at said intermediate transmission station data related to said first programming;	Page 375, lines 13 - 20	Prior to a particular early time, complete local-formula-and-item information is inputted to and caused to be recorded at the computer, 73, of each controlled intermediate transmission station in such a way that each computer, 73, contains complete information relevant to the particular discounts and specials in effect at the particular markets in the vicinity of said station and at the particular time of the network transmission of Q.
transmitting a first control signal to said intermediate transmission station;	Page 377, lines 26 - 35	Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73, and consists of ... information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set- information message (#10)".)
detecting said first control signal at said intermediate transmission station and passing said first control signal to said computer;	Page 378, lines 4 - 6	Transmitting said generate-set-information message (#10) causes said dedicated decoders to detect and input said message to the computers, 73, of said stations.
executing said stored computer program code in response to said first control signal;	Page 378, lines 8 - 12	... load information of said intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes each of said computers, 73, to execute the information so loaded as a machine language job; ...
generating downloadable computer program code	Page 378, lines 20 - 25	... to become complete program instruction set information of this instance of the network transmission of Q; and to record said information at particular memory. (Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of Q.1", ...
by processing said data under control of said stored computer program code;	Page 378, lines 10 - 19	... causes each of said computers, 73, to execute the information so loaded as a machine language job; to compute the specific formula-and-item-of-this-transmission-information of said computer, 73, in the predetermined fashion of said intermediate generation set according to the prerecorded data of the local-formula-and-item information of said computer, 73; to compile said specific formula-and-item-of-this- transmission information into one or more specific machine language program modules; ...

transmitting said downloadable computer program code to said at least one subscriber station in response to a second control signal;	Page 385, lines 3 - 16	Then said program originating studio embeds in the normal transmission location of said transmission and transmits a SPAM message that is addressed to ITS computers, 73, and that contains execution and meter-monitor segments. (Said message is called, hereinafter, the "transmit-and- execute-program-instruction-set message (#10)".) Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program- instruction-set message (#10)", ...
	Page 385, line 35 - page 386, line 2	(Receiving said message causes the apparatus of the intermediate station of Fig. 6 to transmit the program instruction set of Q.1 in the program-instruction-set message (#10) ...
	For example, page 484, lines 2 - 9	... causing each intermediate transmission station, including the station of Fig. 6 and said second intermediate transmission station, to transmit its specific program-instruction-set message (#10), as described above. Receiving the specific program-instruction-set message (#10) of its intermediate transmission station causes each ultimate receiver station to ...
transmitting said first programming to said intermediate transmission station;	Page 374, lines 32 - 35	In example #10, a particular program originating studio transmits the commercial of program unit Q in a network transmission and controls a plurality of intermediate transmission stations ...
receiving said first programming at said intermediate transmission station;	Page 375, lines 4 - 5	The station of Fig. 6 receives said network transmission at receiver, 53, ...
transmitting	Page 375, lines 4 - 6	The station of Fig. 6 receives said network transmission at receiver, 53, and retransmits said transmission immediately via modulator, 83.
a third control signal	Page 382, line 30 - page 383, line 2	... said studio embeds in said transmission and transmits a particular SPAM message whose execution segment is of the aforementioned pseudo command. Transmitting said message causes particular decoder apparatus at said ultimate receiver stations to detect an end of file signal and to commence identifying and processing the individual SPAM messages of the SPAM information subsequently embedded in the transmission of the programming of Q.

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	Page 385, lines 9-16	Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program- instruction-set message (#10)"
	Page 484, ll. 12-15	At the station of Figs. 7 and 7F, receiving the program-instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 . . .
	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
and said first programming	Page 382, lines 15 - 16	Then said program originating studio starts to transmit the conventional television programming of unit Q.
from said intermediate transmission station to	Page 375, lines 4 - 6	The station of Fig. 6 ... retransmits said transmission immediately via modulator, 83.
said at least one subscriber station; and	Page 470, lines 9 - 12	At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission ...
	For example, page 481, lines 2 - 9	... at the station of Figs. 7 and 7F causes decoder, 203, to ... commence identifying and processing the individual SPAM messages of the SPAM information subsequently embedded in the transmission of the programming of Q.
under control of said generated downloadable computer program code, to	Page 485, lines 14 - 18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion.
	Page 486, lines 20 - 27	Automatically, microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM information is transmitted to said screen.
at least one of receive and present second programming with said first programming at said at least one output device,	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
	Page 20, lines 16 - 19	TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a

		conventional television video image and audio sound.
wherein said third control signal executes said downloadable computer code at said subscriber station.	Page 484, lines 12 - 17	At the station of Figs. 7 and 7F, receiving the program-instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to ... execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 ...

44. A method of communicating signals in a communications network, said communications network including at least one origination station and a plurality of intermediate transmission stations, each of said intermediate transmission stations having a receiver, at least one signal generator operatively connected to said receiver, an automatic control unit operatively connected to said signal generator, and a detector operatively connected to said automatic control unit, wherein each said automatic control unit is programmed to perform in a station-specific fashion said method comprising the steps of:	*See* Support for Claim 7	
transmitting information content of at least one first signal from said at least one origination station, said information content of at least one first signal including at least one generation instruction;	Page 374, line 20 - Page 375, line 6	In the present invention, a remote network origination and control station, such as the aforementioned program originating studio that originates the transmission of the "Wall Street Week" program, can control a plurality of intermediate transmission stations in generating and embedding combined medium control instructions--that is, program instruction sets, data module sets, and combining synch commands--that control generating and transmitting at pluralities of ultimate receiver stations. An example #10, focuses on combined medium network control of intermediate transmission stations, controlling ultimate receiver stations. In example #10, a particular program originating studio transmits the commercial of program unit Q in a network transmission and controls a plurality of intermediate transmission stations each of which controls, in turn, a plurality of subscriber stations that are ultimate receiver stations. The station of Fig. 6 is one intermediate transmission station controlled by said studio. The station of Fig. 6

		receives said network transmission at receiver, 53, and retransmits said transmission immediately via modulator, 83.
	Page 377, line 26 - page 378, line 3	Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter- monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set- information message (#10)".) Except for its meter-monitor information, said generate-set-information message (#10) is identical to the aforementioned generate-set-information message (#9).
transmitting information content of at least one transmission control signal from said at least one origination station;	Page 59, lines 29 - 33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Page 385, lines 3 - 8	Then said program originating studio embeds in the normal transmission location of said transmission and transmits a SPAM message that is addressed to ITS computers, 73, and that contains execution and meter-monitor segments. (Said message is called, hereinafter, the "transmit-and- execute-program-instruction-set message (#10)".)
receiving, at each one of said plurality of intermediate transmission stations, said information content of at least one transmission control signal;	Page 385, line 7 - page 386, line 4; Figs. 6A-6B	(Said message is called, hereinafter, the "transmit-and-execute-program-instruction-set message (#10)".) Receiving said message causes ... (Receiving said message causes the apparatus of the intermediate station of Fig. 6 to ... and causes the apparatus of said second intermediate station to ...
passing, at each one of said plurality of intermediate transmission stations, said at least one generation instruction to said automatic control unit;	Page 378, lines 4 - 6; Figs. 6A-6B	Transmitting said generate-set-information message (#10) causes said dedicated decoders to ... input said message to the computers, 73, of said stations.
generating, at each one of said plurality of intermediate transmission stations, in accordance with said generation instruction, information content of a second signal;	Page 365, line 22 - page 366, line 18	Executing the information of said intermediate generation set causes computer, 73, also to generate a particular associated data module. (Hereinafter, a data module that is transmitted to subscriber stations and processed by computers of said stations under control of instructions of a program instruction set is called a "data module set," and any given intermediate generation set may cause generation of information of a data module set or sets in addition to or rather than generating information

		of a program instruction set or sets.) In a fashion well known in the art, computer, 73, selects, from among the data in said local-formula-and-item information, information of the aforementioned "Nabisco Zweiback Teething Toast"; information of the street address of every one of said supermarket chain's markets in the local vicinity of the station of Fig. 6; particular cost-of-a-trimmed-pork-belly-unit information of 1987.25 that is the cost of all the trimmed cuts of meat of a pork belly unit; binary video image information of several telephone numbers, including a particular southwest delivery route telephone number, "456-1414", and a particular northwest delivery route telephone number, "224-3121"; and information of the particular local-automatic-order-taking telephone number of the supermarket chain applicable in the vicinity of the intermediate transmission station of Fig. 6 which is 1-(800) 247-8700. Automatically, computer, 73, places said selected information (and any other information so selected) in a particular file called DATA_OF.ITS until the information of said file constitutes a complete instance of a particular data module set of Q. (Hereinafter, the data module set generated in example #9, under control of said intermediate generation set of Q, is called the "data module set of Q".)
	Page 378, lines 28-35	Executing the information of said intermediate generation set also causes each said computers, 73, to generate and record complete information of a data module set. (Hereinafter, the data module set generated at the station of Fig. 6 in example #10 is called the "data module set of Q.1", signifying that said set is one version of complete data module set information of said instance of the network transmission of Q.)
	Page 380, line 7 - page 381, line 2	(At said second intermediate transmission station, executing the information of said intermediate generation set causes the computer, 73, of said station to ... Executing the information of said intermediate generation set causes said computer, 73, also to select particular data, including said "Cheerios Toasted Oat Cereal" and the street address of every one of said supermarket chain's markets in the locality of said second intermediate station and to record said selected data at said memory unit in a data file named DATA_OF.ITS that corresponds in content to the file of the same name generated a the intermediate station of Fig. 6. [Hereinafter, the data module set generated at said second station is called the "data module set of Q.2", signifying that said set is a second version of complete data module set information of said instance of the network transmission of Q.])
transferring, at each one of said plurality of intermediate transmission stations, to said transmitter in accordance with said transmission control signal, said information	Page 383, line 25 - Page 385, line 2	(Said message is called, hereinafter, the "transmit-data-module-set message (#10)".) Receiving said transmit-data- module-set message (#10) causes each of said computers, 73, to cause stripping and embedding to commence; to generate a particular first outbound SPAM message that includes information of the data file, DATA_OF.ITS, at its data-set- to-transmit RAM memory;

| content of a second signal in a second signal; and | | and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the first outbound SPAM message of any given one of said computers, 73, is called a "data-module-set message (#10)" and all of said first messages are the "data- module-set messages (#10)".) At the station of Fig. 6, the computer, 73, automatically causes stripper, 81, station to commence stripping all signals from the normal transmission location; causes generator, 82, to commence embedding information received from said computers, 73; selects the information of the meter-monitor segment of said transmit- data-module-set message (#10); adds particular information that identifies the station of Fig. 6 and the time of transmission; modifies the meter-monitor format field information to reflect said added information; and retains the received, added, and modified meter-monitor information. Then said computer, 73, selects and transmits to generator, 82, complete information of its data-module-set message (#10) in the following fashion. Automatically, said computer, 73, selects and transmits information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; said retained meter- monitor information; any required padding bits (the requirement for and number which said computer, 73, determines in a predetermined fashion); complete information of the data file at the data-set-to-transmit RAM memory of said computer, 73, which is said file, DATA_OF.ITS and which is complete information of said data module set of Q.1; and information of a SPAM end of file signal. (Receiving said message at said second intermediate station causes the apparatus of said station, in the same fashion, to generate and transmit the data-module-set message (#10) of said station which includes meter-monitor information that identifies said second station and said data module set of Q.2.) Receiving the information of the particular data- module-set message (#10) of the computer, 73, of its station causes each generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular data-module-set message (#10) of said station to said system, 93. |
| transmitting from each intermediate transmission station of said plurality of intermediate transmission stations, said second signal, such that the transmission time of said second signal when transmitted from a first of said plurality of intermediate transmission stations is different from the transmission time of | Page 342, line 26 - Page 342, line 17 | Among said intermediate stations are cable system head ends located in California and Florida, broadcast stations located in Texas and Washington, D.C., and the station of Fig. 6 which is, for example, in Vermont. At each intermediate transmission station is a computer, 73, that is preprogrammed to receive, process, and record, in a predetermined fashion, program schedule information that is transmitted from said remote distribution station. And the signal processor system, 71, and the computer, 73, of each station are preprogrammed to process particular SPAM message instructions are transmitted from said remote distribution station. At a particular time on a particular day--for |

said second signal when transmitted from a second of said plurality of intermediate transmission stations.			example, at 5 P.M. eastern standard time, on January 27, 1988--said remote distribution station commences contacting, individually and in turn in a fashion well known in the art, the computers, 73, of each of said intermediate station, via telephone or other data transfer network, 98 (which has capacity to communicate information individually between said remote station and each of said computers, 73). Said remote station inputs schedule information to each computer, 73. Said information identifies the particular time and date when all of said intermediate transmission stations should commence receiving a particular satellite transmission--for example, at 4 A.M. eastern standard time, on January 28, 1988--and which particular satellite transponder transmission said stations should prepare to receive the programming on-- for example, transponder 23 on the Galaxy 1 satellite.
		Page 369, line 23 - Page 371, line 3	Receiving said transmit-data-module-set message (#9) causes computer, 73, to generate a particular first outbound SPAM message that includes information of the aforementioned data file, DATA_OF.ITS, whose information constitutes a complete instance of a data module set of Q and to cause said message to be embedded in the transmission of the programming of Q and transmitted to field distribution system, 93, in the following fashion. (Hereinafter, said first outbound SPAM message is called the "data-module-set message (#9).") Automatically, computer, 73, causes stripper, 81, to commence stripping all signals from the normal transmission location; causes generator, 82, to commence embedding information received from computer, 73; selects the information of said meter-monitor segment, adds particular information that identifies the station of Fig. 6 and the time of transmission, modifies the meter-monitor format field information to reflect said added information, and retains the received, added, and modified meter-monitor information; and selects and transmits to generator, 82, complete information of said data-module-set message (#9). In selecting and transmitting said complete information, computer, 73, automatically selects and transmits information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; said retained meter-monitor information; any required padding bits (the requirement for and number which computer, 73, determines in a predetermined fashion); complete information of said data file, DATA_OF.ITS; and information of a SPAM end of file signal.
			(The apparatus of the station of Fig. 6 may be preprogrammed in such a fashion that computer, 73, causes generator, 82, to cease embedding in the normal transmission location other signal information such as teletext information then to transmit an end of file signal each time computer, 73, causes generator, 82, to embed a SPAM message of the programming of Q then to recommence transmitting other signal information such as teletext automatically upon embedding said last named

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		message by transmitting an "01" header; execution segment information addressed to appropriate URS receiver apparatus such as URS teletext receiver apparatus; appropriate meter-monitor information; padding bits as required; and information segment information of said other signal information such as teletext. [No end of file signal is transmitted until generator, 82, is caused to cease the transmission of said other signal information.]) Receiving the information of said data-module-set message (#9) causes generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via generator, 82, to field distribution system, 93, thereby transmitting said data- module-set message (#9) to said system, 93.
	Page 383, lines 25-35	Receiving said transmit-data- module-set message (#10) causes each of said computers, 73, to cause stripping and embedding to commence; to generate a particular first outbound SPAM message that includes information of the data file, DATA_OF.ITS, at its data-set- to-transmit RAM memory; and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the first outbound SPAM message of any given one of said computers, 73, is called a "data-module-set message (#10)" and all of said first messages are the "data-module-set messages (#10)".)
	Page 384, line 11 - Page 385, line 2	Then said computer, 73, selects and transmits to generator, 82, complete information of its data-module-set message (#10) in the following fashion. Automatically, said computer, 73, selects and transmits information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; said retained meter- monitor information; any required padding bits (the requirement for and number which said computer, 73, determines in a predetermined fashion); complete information of the data file at the data-set-to-transmit RAM memory of said computer, 73, which is said file, DATA_OF.ITS and which is complete information of said data module set of Q.1; and information of a SPAM end of file signal. (Receiving said message at said second intermediate station causes the apparatus of said station, in the same fashion, to generate and transmit the data-module-set message (#10) of said station which includes meter-monitor information that identifies said second station and said data module set of Q.2.) Receiving the information of the particular data-module-set message (#10) of the computer, 73, of its station causes each generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular data-module-set message (#10) of said station to said system, 93.

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45. The method of claim 44, wherein said generation instruction instructs each of said plurality of intermediate transmission stations to generate microprocessor instructions and	Page 363, lines 34 - Page 365, l. 21	Executing the information of said intermediate generation set causes computer, 73, to generate said program instruction set in the following fashion. Automatically, computer, 73, selects information of each of the aforementioned variables, a, p, q, d, Z, r, s, and dd; computes the value of variable b, under control of intermediate generation set instructions of equation (2), to be 62.21875; computes the value of variable c, under control of intermediate generation set instructions of equation (3), to be 2.117; and replaces particular variable values, a, b, and c, in a particular so-called "higher language line of program code" that is among the aforementioned generally applicable information of said program instruction set and is: $$Y = a + b + (c * X)$$ [which is equation (1) in the language of the IBM BASIC of the IBM Personal Computer Hardware Reference Library] with said selected information of a and the so computed information of b and c to become formula-and-item-of-this- transmission information of: $$Y = 1000.00 + 62.21875 + (2.117 * X)$$ [which is formula-and-item-of-this-transmission information in said BASIC]. Automatically, computer, 73, selects and computes information of other variables and replaces other variable values of said generally applicable program instruction set information until a complete instance of higher language code of said program instruction set with all required formula-and-item-of-this-transmission information has been generated and exists at particular memory. Automatically, computer, 73, compiles the information of said instance and places the resulting so-called "object module" at particular memory (which compiling could be done, in the case of a program written in IBM BASIC, with the IBM BASIC Compiler of the IBM Personal Computer Computer Language Series). Automatically, computer, 73, links the information of said object module with information of other compiled object modules that exist in memory at computer, 73, (and may have been transmitted to computer, 73, in the generally applicable program instruction set information if said intermediate generation set); generates a particular PROGRAM.EXE output file that is said program instruction set; and places said file at particular program-set-to-transmit memory of computer, 73, (which linking could be done, in the case of a program compiled by the IBM BASIC Compiler with the linker program of the IBM Disk Operating System of the IBM Personal Computer Computer Language Series). One of said other compiled object modules is a module that, when accessed in a fashion well known in the art, computes the shortest vehicle driving distance between any two locations in the local vicinity of the station of Fig. 6 when passed two street addresses of said vicinity. (Hereinafter, the program instruction set generated in example #9, under control of said intermediate generation set of Q, is called the "program instruction set of Q".)

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	Page 380, lines 7-24	(At said second intermediate transmission station, executing the information of said intermediate generation set causes the computer, 73, of said station to compute the values of variables b and c as 132.2362 and 2.0882 respectively; to replace variable values, a, b, and c, with formula-and-item-of-this-transmission information of: Y = 1000.00 + 132.2362 + (2.0882 * X) to process other variable information; and to compile, link, and record information at a particular peripheral memory unit of said computer, 73, in a file named "PROGRAM.EXE" that is the specific program instruction set of said second intermediate station. [Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", signifying that said set is a second version of complete program instruction set information of said instance of the network transmission of Q.]
said automatic control unit is programmed with data of at least one of (i) at least one formula and	Page 360, lines 16-29	Said formula-and-item-of-this-transmission information can consist of both computer program instructions and data. For example, one of the aforementioned discounts and cents- off coupon specials is of a 15 cents off coupon special on an offered product that varies from week to week and market to market. The information of the particular product that is offered at the particular time of the scheduled transmission at the station of Fig. 6 and at the particular supermarkets in the locality of said station is data that exist in the aforementioned local-formula-and-item information--eg., "Nabisco Zweiback Teething Toast". Other data in said local- formula-and-item information includes, for example, the street address of every one of said supermarket chain's markets in the locality said station.
(ii) at least one item	Page 363, lines 9-23	At the aforementioned interval Q time prior to the scheduled playing of Q, when computer, 73, commences generating said program instruction set, the local- formula- and-item information of computer, 73, includes information that: a is 1000.00 p is .00625 q is .12 d is .1 Z is 275 r is .007 s is 2.00 dd is .11
to be generated.	Page 376, lines 22-26	(At a particular second intermediate transmission station, the local-formula-and-item information of the computer, 73, include the specific values: a is 1000.00, p is .00625, q is .13, d is .11, Z is 537, r is .0082, s is 1.98, and dd is .10.
	Page 380, lines 6-32	(At said second intermediate transmission station, executing the information of said intermediate generation

		set causes the computer, 73, of said station to compute the values of variables b and c as 132.2362 and 2.0882 respectively; to replace variable values, a, b, and c, with formula-and-item-of-this-transmission information of: $$Y = 1000.00 + 132.2362 + (2.0882 * X)$$ to process other variable information; and to compile, link, and record information at a particular peripheral memory unit of said computer, 73, in a file named "PROGRAM.EXE" that is the specific program instruction set of said second intermediate station. [Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", signifying that said set is a second version of complete program instruction set information of said instance of the network transmission of Q.] Executing the information of said intermediate generation set causes said computer, 73, also to select particular data, including said "Cheerios Toasted Oat Cereal" and the street address of every one of said supermarket chain's markets in the locality of said second intermediate station and to record said selected data at said memory unit in a data file named DATA_OF.ITS that corresponds in content to the file of the same name generated a the intermediate station of Fig. 6.
	Page 358, lines 1-22	Said generally applicable information lacks specific information that is required to complete the generation of a given instance of a generated program instruction set. (For example, in the case of unit Q, the intermediate generation set lacks information of the particular discount formulas and items offered as cents-off coupon specials that apply at the scheduled time of the transmission of unit Q at the particular supermarket or markets that are local to the station of Fig. 6.) 　　　When executed at a computer, 73, that is preprogrammed with particular local-formula-and-item information (that is, particular data), the instructions of a given intermediate generation set (that is, of a given computer program) cause said computer, 73, to generate particular formula-and-item- of-this-transmission information and incorporate said information into said generally applicable information of said particular program instruction set, thereby generating the particular program instruction set instance applicable to a particular transmission at a particular intermediate transmission station. The set information so generated may consist of computer program instructions and/or data.

46. 　　The method of claim 44, wherein said automatic control units are programmed to respond to said at least one generation instruction at different times.	*See* support for claim 10	

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47. The method of claim 44, wherein said at least one first signal contains mass medium programming, said method further comprising the steps of: communicating said mass media programming to said transmitter based on receipt of said transmission control signal; and retransmitting said mass medium programming from each of said plurality of intermediate transmission stations at a time that is different at each intermediate transmission station.	*See* support for claim 11	
48. The method of claim 44, further comprising the step of transmitting from a second origination station an instruct signal that causes at least one of said plurality of intermediate transmission stations to store a second generation instruction and a second transmission instruction.	*See* support for claim 12	
49. The method of claim 48, further comprising the step of transmitting said second generation instruction from said second origination station.	*See* support for claim 13	
50. The method of claim 47, wherein said mass medium programming includes audio.	*See* support for claim 14	
51. The method of claim 44, wherein each of	*See* support for claim 15	

said plurality of intermediate transmission stations further has a switch and an automatic control unit that is programmed to control said switch.		

52. The method of claim 44, wherein each of said plurality of intermediate transmission stations retransmits programming, said method further comprising the step of transmitting said programming from said at least one origination station to said plurality of intermediate transmission stations.	*See* support for claim 16	

53. The method of claim 46, wherein at least one of said plurality of intermediate transmission stations is programmed to receive at least one generation instruction from a local source.	*See* support for claim 17	

55. The method of claim 44, wherein a retransmission control signal instructs said plurality of intermediate transmission stations to retransmit immediately, said method further comprising the step of selecting at least one of said at least one generation instruction and said at least one transmission instruction to store and retransmit.	*See* support for claim 19	

56. The method of claim 52, wherein said programming includes said second signal.	Page 369, line 23 - Page 371, line 3	Receiving said transmit-data-module-set message (#9) causes computer, 73, to generate a particular first outbound SPAM message that includes information of the aforementioned data file, DATA_OF.ITS, whose information constitutes a complete instance of a data module set of Q and to cause said message to be embedded in the transmission of the

| | | programming of Q and transmitted to field distribution system, 93, in the following fashion. (Hereinafter, said first outbound SPAM message is called the "data-module-set message (#9).") Automatically, computer, 73, causes stripper, 81, to commence stripping all signals from the normal transmission location; causes generator, 82, to commence embedding information received from computer, 73; selects the information of said meter-monitor segment, adds particular information that identifies the station of Fig. 6 and the time of transmission, modifies the meter-monitor format field information to reflect said added information, and retains the received, added, and modified meter-monitor information; and selects and transmits to generator, 82, complete information of said data-module-set message (#9). In selecting and transmitting said complete information, computer, 73, automatically selects and transmits information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; said retained meter-monitor information; any required padding bits (the requirement for and number which computer, 73, determines in a predetermined fashion); complete information of said data file, DATA_OF.ITS; and information of a SPAM end of file signal.

　　　　　　　　　(The apparatus of the station of Fig. 6 may be preprogrammed in such a fashion that computer, 73, causes generator, 82, to cease embedding in the normal transmission location other signal information such as teletext information then to transmit an end of file signal each time computer, 73, causes generator, 82, to embed a SPAM message of the programming of Q then to recommence transmitting other signal information such as teletext automatically upon embedding said last named message by transmitting an "01" header; execution segment information addressed to appropriate URS receiver apparatus such as URS teletext receiver apparatus; appropriate meter-monitor information; padding bits as required; and information segment information of said other signal information such as teletext. [No end of file signal is transmitted until generator, 82, is caused to cease the transmission of said other signal information.])
　　　　　Receiving the information of said data-module-set message (#9) causes generator, 82, to embed said information in the normal transmission location of the programming of Q　transmission being transmitted via generator, 82, to field distribution system, 93, thereby transmitting said data- module-set message (#9) to said system, 93. |
| | Page 383, lines 25-35 | Receiving said transmit-data- module-set message (#10) causes each of said computers, 73, to cause stripping and embedding to commence; to generate a particular first outbound SPAM message that includes information of the data file, DATA_OF.ITS, at its data-set- to-transmit RAM memory; and to cause said message to be transmitted to its field distribution system, 93. |

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		(Hereinafter, the first outbound SPAM message of any given one of said computers, 73, is called a "data-module-set message (#10)" and all of said first messages are the "data- module-set messages (#10)".)
	Page 384, line 11 - Page 385, line 2	Then said computer, 73, selects and transmits to generator, 82, complete information of its data-module-set message (#10) in the following fashion. Automatically, said computer, 73, selects and transmits information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; said retained meter- monitor information; any required padding bits (the requirement for and number which said computer, 73, determines in a predetermined fashion); complete information of the data file at the data-set-to-transmit RAM memory of said computer, 73, which is said file, DATA_OF.ITS and which is complete information of said data module set of Q.1; and information of a SPAM end of file signal. (Receiving said message at said second intermediate station causes the apparatus of said station, in the same fashion, to generate and transmit the data-module-set message (#10) of said station which includes meter-monitor information that identifies said second station and said data module set of Q.2.) Receiving the information of the particular data-module-set message (#10) of the computer, 73, of its station causes each generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular data-module-set message (#10) of said station to said system, 93.

57. The method of claim 56, wherein at least a portion of said second signal is embedded in the normal transmission location of said programming.	*See* support for claim 56	

58. The method of claim 57, wherein said programming includes audio.	*See* support for claim 22	

59. The method of claim 45, further comprising the step of at least one compiling and linking said microprocessor	*See* support for claim 23	

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instructions.		

60. The method of claim 44, further comprising the step of transmitting at least one of a signal for comparison and at least one retransmission control signal from a first one of said plurality of intermediate transmission stations.	*See* support for claim 24	

61. A method of communicating signals in a communications network, said communications network including at least one origination station and a plurality of intermediate transmission stations, each of said plurality of intermediate transmission stations having a transmitter, a receiver, at least one signal generator that is operatively connected to said receiver, an automatic control unit operatively connected to said signal generator, and a detector operatively connected to said automatic control unit, each automatic control unit being programmed to perform in a station specific fashion, said method comprising the steps of:	*See* support for the preamble of claim 3	
	Page 375, line 34 - page 376, line 4	And information that applies only at a selected one of said stations--for example, the street address of every one of said supermarket chain's markets in the locality of a given station--is inputted individually to the computers, 73, of said stations by means of, for example, a local input, 74, or a network, 98.
originating a first generation instruction at said at least one origination station	Page 377, lines 25-29	Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73 . . .
	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message

		controls specific addressed apparatus at subscriber stations.
that instructs each of said plurality of intermediate transmission stations to generate processor instructions in accordance with said first generation instruction	Page 378, lines 7-25	Receiving said message at said computers, 73, causes each of said computers, 73, to load information of said intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes each of said computers, 73, to execute the information so loaded as a machine language job; to compute the specific formula-and-item-of-this-transmission-information of said computer, 73, in the predetermined fashion of said intermediate generation set according to the prerecorded data of the local-formula-and-item information of said computer, 73; to compile said specific formula-and-item-of-this-transmission information into one or more specific machine language program modules; and to link said specific module or modules to other program modules to become complete program instruction set information of this instance of the network transmission of Q; and to record said information at particular memory. (Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of Q.1"
	Page 378, lines 23-28	(Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of Q.1", signifying that said set is one version of complete program instruction set information of said instance of the network transmission of Q.)
	Page 379, lines 5-31	At the station of Fig. 6, for example, executing the information of said intermediate generation set causes the computer, 73, in precisely the fashion that applied in example #9, to compute the value of a particular variable b to be 62.21875; to computes the value of a particular variable c to be 2.117; and to replaces particular variable values, a, b, and c, in a particular so-called "higher language line of program code" to become formula-and-item-of- this-transmission information of: $$Y = 1000.00 + 62.21875 + (2.117 * X)$$ to select, compute, and replace other variable information until complete program instruction set information exists in higher language code at particular memory; to compile said higher language information; to link the information so complied with other compiled information; and to record the information so computed, compiled, and linked (which is complete information the program instruction set of Q of the station of Fig. 6) in a file named "PROGRAM.EXE", in a fashion well known in the art, on a computer memory disk of computer, 73. In so doing, said computer, 73, generates the specific program instruction set version--that is, the program instruction set of Q.1--that applies to the particular discounts and specials in effect at the particular markets in the vicinity of said station and at the particular time of the network transmission of Q.

	Page 380, lines 7-23	(At said second intermediate transmission station, executing the information of said intermediate generation set causes the computer, 73, of said station to compute the values of variables b and c as 132.2362 and 2.0882 respectively; to replace variable values, a, b, and c, with formula-and-item-of-this-transmission information of: $$Y = 1000.00 + 132.2362 + (2.0882 * X)$$ to process other variable information; and to compile, link, and record information at a particular peripheral memory unit of said computer, 73, in a file named "PROGRAM.EXE" that is the specific program instruction set of said second intermediate station. [Hereinafter, the program instruction set generated at said second station is called the "program instruction set of Q.2", signifying that said set is a second version of complete program instruction set information of said instance of the network transmission of Q.]
originating a second generation instruction at said at least one origination station that instructs each of said plurality of intermediate transmission stations to generate a signal including said processor instructions in accordance with said second generation instruction;	Page 385, lines -9-30	Then said program originating studio embeds in the normal transmission location of said transmission and transmits a SPAM message that is addressed to ITS computers, 73, and that contains execution and meter-monitor segments. (Said message is called, hereinafter, the "transmit-and- execute-program-instruction-set message (#10)".) Receiving said message causes each of said computer, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program- instruction-set message (#10)", and all of said second messages are the "program-instruction-set messages (#10).") Automatically, each of said computers, 73, selects the information of said meter-monitor segment, adds particular information that identifies its station and the time of transmission, modifies the meter-monitor format field information to reflect said added information, and retains the received, added, and modified meter-monitor information. Then, automatically, each of said computers, 73, selects and transmits to the generator, 82, of its station, information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; its retained meter-monitor information; any required padding bits; complete information of the program instruction set that is at its program-set-to transmit RAM memory; and information of a SPAM end of file signal.
	Page 484, lines 7-18	Receiving the specific program-instruction-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the PROGRAM.EXE information in said message at particular RAM and execute the information so loaded

		as a machine language job. At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
transmitting said first generation instruction; and	Page 377, lines 25-29	Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73 . . .
transmitting said second generation instruction.	Page 385, lines 3 - 6	Then said program originating studio embeds in the normal transmission location of said transmission and transmits a SPAM message that is addressed to ITS computers, 73, and that contains execution and meter-monitor segments.